COUNTY OF TULARE
RESOURCE MANAGEMENT AGENCY

5961 South Mooney Boulevard
Visalia, CA 93277

Cutler-Orosi Community Plan Update

GPA 18-003 (Community Plan)
PZC 18-011 (Zoning District Map)
PZC 18-009 (Section 18.9 Zoning Ordinance - Mixed Use)
PZC 18-010 (Section 16 Zoning Ordinance - By Right)

Draft Environmental Impact Report

September 2021

Prepared by
County of Tulare Resource Management Agency
Economic Development Planning Branch
Environmental Planning Division

Table of Contents

Draft Environmental Impact Report
Draft Cutler-Orosi Community Plan 2021 Update (SCH No. 2021040258)

Chapter 4 - Summary of Cumulative Impacts

Chapter 5 - Alternatives

Chapter 6 - Economic, Social, & Growth Inducing Effects

Chapter 7 - Unmitigable Impacts

Figures

Tables

Appendices

Appendix A: Air Quality and Greenhouse Gas Analysis Report

Tulare County Resource Management Agency, Air Quality and Greenhouse Gas Assessment Technical Report, September 16, 2021.

Appendix B: Biological Resources Assessment

Live Oak Associates, INC., Cutler-Orosi Community Plan Update Biological Evaluation Tulare, County, California, May 7, 2021.

Appendix C: Cultural and Tribal Cultural Resources

Appendix D: Water Supply Study

Consulting Civil Engineers. Water Supply Study Cutler-Orosi Area, February 2007.

Appendix E: Noise Study Report

VRPA Technologies, Noise Study Report, Cutler-Orosi Community Plan Update.

Appendix F: Transportation Impact Study Report

VRPA Technologies, Transportation Impact Study report.

Appendix G: Draft Community Plan Update

Tulare County Resource Management Agency, Draft Cutler-Orosi Community Plan 2021 Update, September 2021.

Appendix H: CEQA Noticing

Executive Summary

This Draft Environmental Impact Report (DEIR or EIR) will conclude that the proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impact*** to all resources. A Statement of Overriding Considerations is not necessary as there will be no significant and unavoidable impact.

The EIR has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public and the Tulare County Planning Commission of the potential environmental impacts the proposed Project would have on resources as specified in the CEQA Guidelines. This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

Although the Mandatory Findings of Significance is not a resource per se, it is required as it essentially provides a summary conclusion of the Project's potential on Long Term Impacts, Cumulative Impacts, and Impacts to Species, Impacts to Historical Resources, and Impacts on Human Beings. It is at this discussion where the EIR concludes that no significant adverse environmental impacts from the Project will occur.

The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public disclosure document designed to provide local and state governmental agency decision makers with an objective analysis of potential environmental consequences to support informed decision-making. This EIR (**State of California Clearinghouse No. 2021040258**) has been prepared by Tulare County in accordance with CEQA Guidelines §15120 through §15131 and §15161 regulating EIRs to evaluate the environmental consequences of the a comprehensive update of the Cutler-Orosi Community Plan 2021 Update, General Plan Amendment, and Zone Ordinance Amendment, to discuss alternatives to the proposed Project, and to propose mitigation measures that will offset, minimize or avoid identified significant environmental impacts. This

document focuses on issues determined to be potentially significant as discussed in the Initial Study and the public scoping process completed for this project, as well as comments received on the Notice of Preparation (NOP) circulated by Tulare County from April 9 through May 10, 2021.

PROJECT DESCRIPTION

On September 30, 2014, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Cutler-Orosi Community Plan. The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. (See **Figure ES-2**). The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Cutler-Orosi Community Plan 2021 Update components are described later in this section. will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the following General Plan goals:

b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a “disadvantaged community” - It is expected that the community planning areas will be improved for the following reasons:

a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013)

General Plan Update and Housing Element; and

c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

PROJECT LOCATION

Tulare County is located in central California in the heart of the San Joaquin Valley **(see Figure ES-1)**. The County is composed of eight incorporated cities and numerous unincorporated communities. Most of the unincorporated communities and all of the cities are located on the Valley floor. The foothills and Sequoia and Kings Canyon National Parks form the eastern half of the County.

Cutler-Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the county seat. Both communities are located along State Route (SR) 63 about one half mile apart. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler. The communities are situated at the base of the Sierra Nevada Mountain foothills.

Cutler is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses 0.8 square miles of land (see Figure 2). Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bounded by Avenue 408 in the south, Avenue 424 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses 2.4 square miles of land. State Route (SR) 63 directly serves Orosi. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast.

Combined, as of 2020, Cutler-Orosi have an estimated population of 14,148.[1]

"The existing Urban Development Boundary (UDB) area (see Figure 4 [in the Community Plan; **Figure 2-3** in the Draft EIR**)** consists of approximately 2,442 acres (including rights-of-way). Within the existing Cutler-Orosi UDB, approximately 1,245 acres are currently zoned for urban uses and approximately 957 acres are zoned for a for agricultural uses. Cutler-Orosi are surrounded by agricultural lands, crops grown on these lands include field crops, deciduous fruit orchards, and vineyards. Unlike many Valley communities, there is little rural residential development (1 to 5 acre homesites (sic)) surrounding either community. The UDB includes areas within the Cutler Public Utility District (CPUD) and the Orosi Public Utility District (OPUD) in order to provide service area consistency between these two boundaries.[2]

[1] Draft Cutler-Orosi Community Plan 2021 Update. Cutler Orosi 176.
[2] Ibid. 30

Figure ES-1 - Vicinity Map

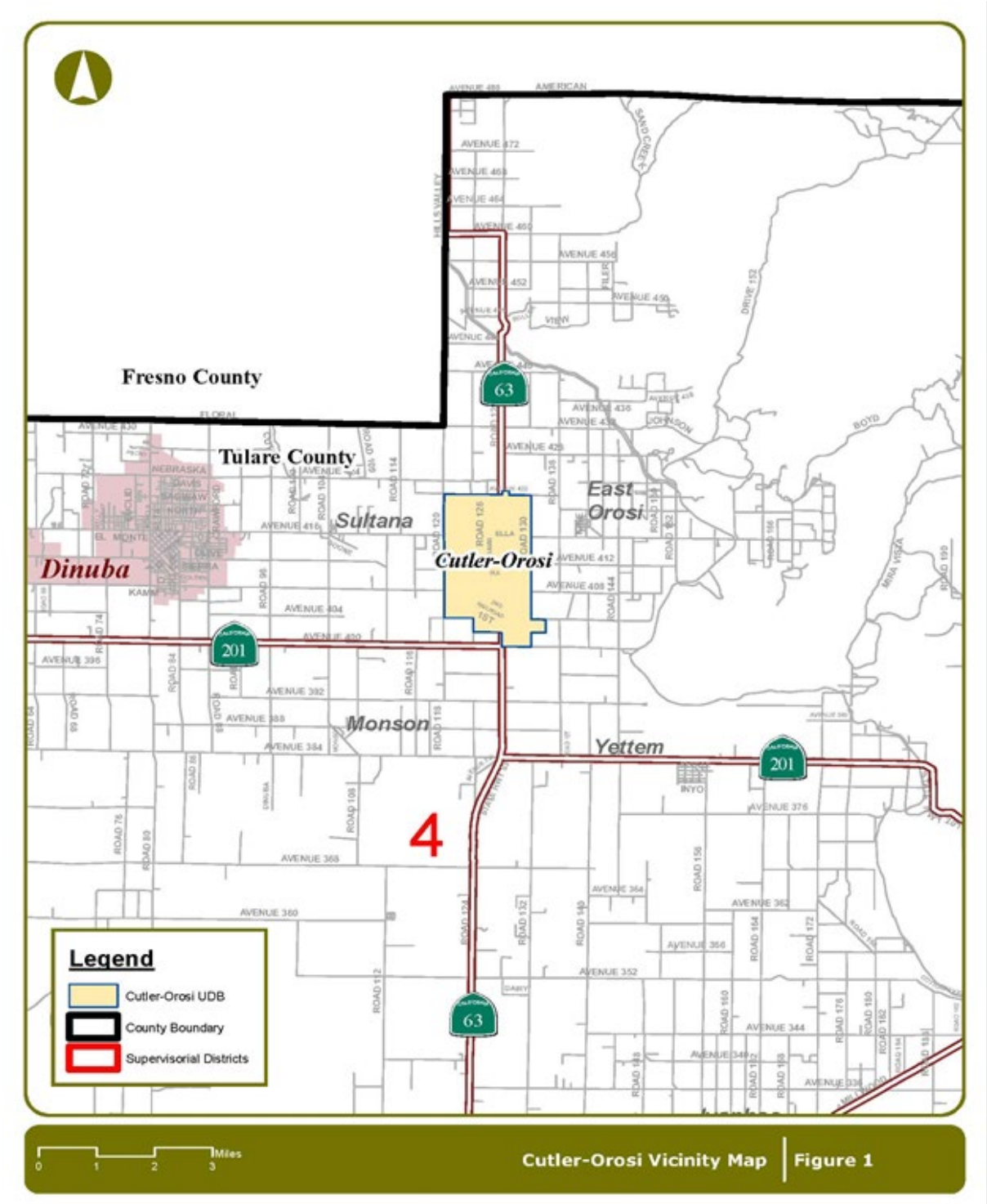
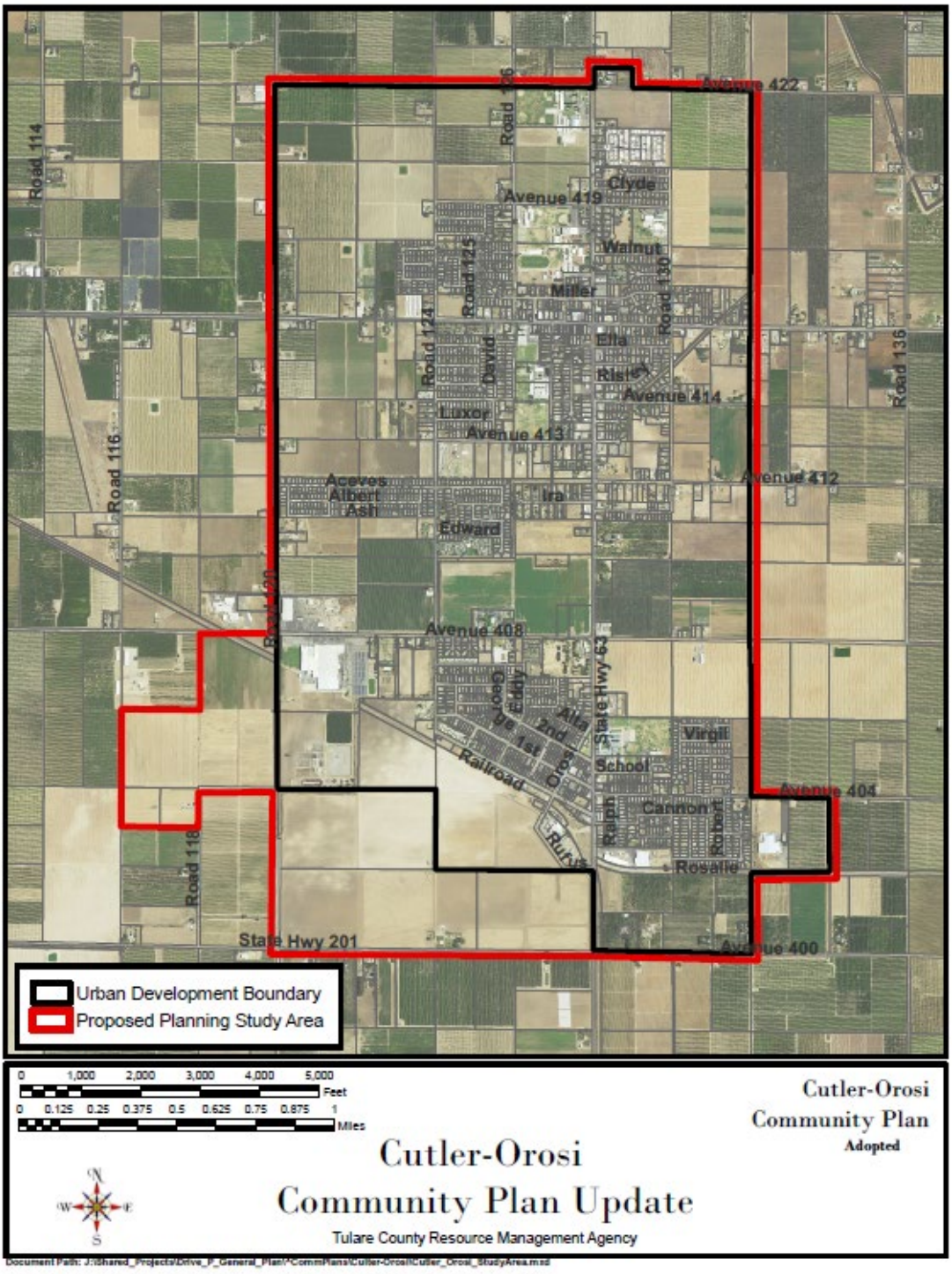


Figure ES-2 – Cutler-Orosi Community Plan Study Area with Proposed UDB Study Area



PROJECT COMPONENTS

The Cutler-Orosi Community Plan 2021 Update components are described later in this section will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

This DEIR will evaluate potential impacts from the buildout of the Cutler-Orosi Community Plan 2021 Update at the program level, as well as the project level for specific proposals, as identified below.

a) Land Use and Rezoning. Tulare County is proposing new land use and zoning designations. These changes will update the land use and zoning to be consistent with the General Plan, and will bring existing non-compliant properties into conformity with the Tulare County Zoning Code. This process involved looking at the existing properties, meetings with the Community, and review of aerial maps and County records to analyze and decide on which properties were to be updated.

b) Mixed Use Zone. The Cutler-Orosi Community Plan 2021 Update includes a mixed use zone. This Community Plan Update requires the updating the Tulare County Zoning Code to reflect a mixed use zoning district specifically within the Cutler-Orosi Community in compliance with the mixed use designation in the General Plan.

c) Complete Streets. The Cutler-Orosi Complete Streets Program was approved by the Board of Supervisors on December 30, 2016, for inclusion in the Circulation Element of this Community Plan Update. The Cutler-Orosi Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The Complete Streets Program also contemplates use of alternative transportation and facilities for all users from the elderly to children and will be useful in proposing Safe Routes to School and other Public Benefit Projects in the Community.

PROJECT OBJECTIVES & BENEFITS

Objectives of the Project

The following objectives have been outlined in the "Goals, Objectives, and Policies" section of the Cutler-Orosi Community Plan Update.

- Objective 1: Prevent premature urban-type development on agriculturally productive lands.
- Objective 2: Promote concentrations of similar or compatible uses.
- Objective 3: Provide for appropriate buffers between areas set aside for commercial activities and single family residential uses.

- Objective 4: Encourage land uses adjacent to State Route 63 and Avenue 416 which are consistent with noise impacts.
- Objective 5: Urbanization in the planning areas should be contiguous and compact.
- Objective 6: Encourage merger of existing vacant substandard lots within the town site of Cutler/Orosi.
- Objective 7: Ensure that all development can be served by the Cutler/Orosi Public Utility District (IPUD) during the planning period.
- Objective 8: Reduce deficiencies in existing housing stock.
- Objective 9: Encourage new housing construction within the community to meet the needs of low and moderate income residents.
- Objective 10: Provide a role for mobile homes in satisfying community housing needs.
- Objective 11: Provide sufficient land for industrial and commercial development to meet the needs of the community and region and strengthen and maintain a viable community economy.
- Objective 12: Provide the services necessary to support new industrial and commercial development.
- Objective 13: Provide the necessary safe guards to attract quality industrial and commercial development to the community.
- Objective 14: Upgrade the level of community health, sanitation and safety.
- Objective 15: Provide sufficient open space for community recreation needs.
- Objective 16: Protect Agricultural Lands.
- Objective 17: Prohibit to the extent allowed by law activities that will have a significant adverse effect on the environmental quality of Cutler/Orosi.

Project Benefits:

Project Benefit # 1 – Implementation of AB 32

AB 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of (GHG) emission to 1997 models by the year 2020 and implements the objectives for the Year 2050 goal.

Project Benefit # 2: - Sustainability

Tulare County Climate Action Plan (CAP). In light of AB 32, the County of Tulare Board of Supervisors adopted its General Plan 2030 Update on August 28, 2012 and included a Climate Action Plan (or CAP). This Climate Action Plan identifies specific General Plan policies that encourage solid waste reduction. The proposed Project was developed to support and implement the efforts made by Tulare County to address climate change through its General Plan and Climate Action Plan.

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. Nine (9) General Plan policies that relate to Sustainability; below is a summary of some of those policies.

PF-3.4 Mixed Use Opportunities
LU-1.1 Smart Growth and Healthy Communities
LU-1.8 Encourage Infill Development
LU-7.15 Energy Conservation
LU-7.16 Water Conservation
LU-7.17 Shared Parking Facilities
AQ-3.3 Street Design
AQ-3.5 Alternative Energy Design
AQ-3.6 Mixed Land Uses

TCAG Sustainable Communities Strategy (2018 Regional Transportation Plan)

Assembly Bill (AB) 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of GHG emissions to 1997 levels by the Year 2020 and implementation of the objectives for the Year 2050 goal.

Project Benefit # 3 - Lessen Significant Impacts

Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creations of additional buildings require the use of additional resources, which on a cumulative basis would increase impacts to environment in general.)

Project Benefit # 4 - Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if a site for a particular alternative is too small, or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

Project Benefit # 5 - Project Specific Elements

Overall, all elements (including land use designation and zoning/rezoning of properties, road construction and maintenance programs) within the Study Area were studied.

a) Land Use and Rezoning. The County is proposing six (6) new land use and zoning districts. These changes are reflective of updating the designations to be consistent with the land uses within the General Plan and to bring existing non-compliant properties

into conformity with the Tulare County Zoning Code. This required a review of existing properties, meetings with the Community, review of aerial maps, and review of County records to analyze and ultimately determine which properties would be updated.

b) Mixed Use Zone. The Goshen Community Plan includes a mixed use zone. This Community Plan Update requires the updating the Tulare County Zoning Code to reflect a mixed use zoning district specifically within the Goshen Community in compliance with the mixed use designation in the 2030 General Plan.

Complete Streets. The Cutler-Orosi Complete Streets Program was approved by the Board of Supervisors in December 2016 for inclusion in the Circulation Element of this Community Plan Update. The Cutler-Orosi Complete Streets Program has analyzed alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The Complete Streets Program also contemplates use of alternative transportation and facilities for all users from the elderly to children and will be useful in proposing Safe Routes to School and other Public Benefit Projects in the Community. In addition, the plan has identified Complete Streets incorporation for the following areas:

Cutler

1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Road
5. First Drive – SR 63 to Road 124

Orosi

1. Avenue 413 – Road 124 to SR 63
2. Avenue 419
3. Avenue 416 – SR-63 to Dinuba
4. Road 130 (Strong interest from school district)
5. Road 124

c) Residential and Commercial Projects. The draft Community Plan Update is being analyzed by this EIR (See Figure 27 - Proposed Land Use Plan - Cutler-Orosi and Figure 28 – Proposed Zoning Districts Map of the Plan Update; **Figure 3.11-3** and **Figure 3.11-4**; respectively, in this Draft EIR) to examine residential densities and potential impacts to Cutler-Orosi community:

i. Low Density Residential: The Low Density areas are planned to accommodate single-family homes on individual lots where urban services (i.e. community water and sewer) are provided. Properties designated low density residential

generally lack adequate infrastructure to warrant higher densities, or serve as a transitional use between urban and agricultural uses. This residential designation promotes a rural environment where livestock and small farming operations are allowed.

ii. Medium Density Residential: Medium Density Residential areas are planned to accommodate single-family homes on individual lots where urban services (i.e.) community water and sewer) are provided, at higher densities than the area designated for Low Density Residential Development. Medium Density Residential is applied to most of the residential land in Cutler and Orosi. Properties with this designation are, or will become, the single-family neighborhoods of each community. This designation is generally applied to properties that are free of excessive noise and through traffic, are in close proximity to parks and schools, are provided with off-site sewer and water, and are within the immediate service area of fire and police services.

iii. High Density Residential: High Density Residential designation provides for residential development with a wide range of densities and housing types. High density residential is the designation reserved for multiple family units or apartments. This Plan has attempted to insure that no one quadrant of either community is overburdened with apartments. Too many apartments in any one neighborhood increases traffic, noise, and on-street parking. Further, if not properly designed or maintained, the apartments can become a blighting influence on the neighborhood. Multiple family development generates much more traffic on an acreage basis than single-family development. In addition, multiple family development presents many more design options that can be used to help mitigate noise situations.

iv. Residential Reserve: Land designated for future residential use which should remain in accordance with Policy 5.1. It should be noted that a general plan amendment is not agricultural use until it is determined that conditions warrant conversion to residential use, needed to develop land in a reserve classification.

v. General Commercial: Commercial development first appeared near the intersection of SR 63 and Avenue 416, and have since spread in strip fashion along these routes.

vi. Service Commercial: Orosi contains one area approximately 12 acres of service commercial, located south of Avenue 416. Cutler contains two areas (approximately 68 acres and approximately 11 acres of Service Commercial along rail bed footprint.

vii. Industrial Reserve: Currently, industry in the Cutler/Orosi area is concentrated along the former A.T & S.F. Railroad alignment. Packing houses, cold storage

facilities, a box manufacturing plant, and an agricultural chemical company are in this former railway alignment including a 5-acre parcel south of Avenue 416, east of SR 63, in Cutler.

d) Preferred Alternative/Environmentally Superior Alternative: Alternative B. Proposed Land Use Plan and Expansion of the UDB – Under this scenario, the Community Plan Update encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler-Orosi Wastewater Treatment Plan. The Community Plan Update proposes an approximately 712.1-acre expansion to the existing Urban Development Boundary (UDB), and amendments to land use and zoning designations. As such, the proposed Community Plan Update will expand the existing 2,441.9-acre UDB (see **Figure 3.11-3**) by approximately 29.2%, for a total UDB area of approximately 3,154.0-acres. As part of this Project, the County is adopting a change to the Zoning Code to allow a Mixed Use Zoning District consistent with the General Plan's new Mixed Use land use designation. Also, the Project would result in expansion of the Updated Plan's Urban Development Boundary to accommodate projected growth and land use needs. The Community Plan also includes a Complete Streets Program, which has been developed concurrently with this process and has been found to be in consistent with the requirements of the Complete Streets Program.

Project Benefit # 6: Implementation of Countywide General Plan Policies

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-20. Two hundred seventy-five (275) General Policies apply to this Project. Following is a summarized listing and numerical accounting of applicable General Policies by resource:

I. AESTHETICS – 14 Policies
II. AGRICULTURAL LANDS & FORESTRY RESOURCES – 12 Policies
III. AIR QUALITY – 31 Policies
IV. BIOLOGICAL RESOURCES – 11 Policies
V. CULTURAL RESOURCES – 6 Policies
VI. ENERGY - 5 Policies
VII. GEOLOGY AND SOILS – 5 Policies
VIII. GREENHOUSE GAS EMISSIONS – 6 Policies
IX. HAZARDS AND HAZARDOUS MATERIALS – 5 Policies
X. HYDROLOGY AND WATER QUALITY - 40 Policies
XI. LAND USE AND PLANNING - 23 Policies
XII. MINERAL RESOURCES – 12 Policies
XIII. NOISE – 17 Policies
XIV. POPULATION AND HOUSING – 33 Policies
XV. PUBLIC SERVICES – 10 Policies
XVI. RECREATION – 6 Policies
XVII. TRANSPORTATION/TRAFFIC – 10 Policies
XVIII. TRIBAL CULTURAL RESOURCES - 7 Policies

XIX. UTILITIES AND SERVICE SYSTEMS - 22 Policies
XX. WILDFIRE - 0 Policies

SUMMARY OF CHAPTERS

Chapter 1 Introduction

The Introduction discussion contained in Chapter 1 consists of a Project Summary; Identification of Potentially Significant Impacts; Consideration of Significant Impacts; Mitigation Measures; Organization of the EIR; and Environmental Review Process. Below is a summary of each of these components within Chapter 1:

The Cutler-Orosi Community Plan 2021 Update (Plan Update or Update) is being updated to implement the 2030 Tulare County General Plan (2012). Among the entitlements to be updated are the General Plan Amendment, changes to Zoning District Boundaries, and the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Plan Update. Consistent with the General Plan and the Study Area Boundary the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary and their impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors in December 2016 for inclusion in the Circulation Element of this Plan Update. The Cutler-Orosi Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, pedestrian circulation.

The Tulare County Association of Government has prepared the 2018 Regional Transportation Plan (RTP). The RTP contains Complete Streets project for Cutler-Orosi (as contained in Appendix A of the RTP[3]) and listed as follows:

Tulare County Complete Streets - Cutler/Orosi

Cutler
1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Rd
5. First Drive – SR 63 to Road 124

Orosi
1. Avenue 416 – SR 63 to Road 140 (East Orosi)
2. Avenue 413 – Road 124 to SR 63
3. Avenue 419
4. Avenue 416 – SR-63 to Dinuba

[3] Ibid TCAG 2018 RTP and SCS. Executive Summary. PDF page 5. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/executive-summary/.

5. Road 130 (Strong interest from the school district)
6. Road 124

The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas generally south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA.

The Project's Plan Update Study Area is shown in **Figure 1-1**, the Existing Urban Development Boundary (UDB) is shown in **Figure 1-2**, while the Proposed UDB is shown in **Figure 1-2**. As shown in **Figure 1-2**, the Project's Planning Area is coterminous with the proposed UDB.

The County is proposing six (6) new land use and zoning designations (including a Mixed Use zone) and an update to the Zoning Code to include a mixed use zoning district consistent with the mixed use designation in the 2030 General Plan. As provided in greater detail in Chapter 5 Alternatives, the preferred Project Alternative is Alternative B. This scenario proposes an expansion of the UDB by 712 acres to accommodate projected growth and land use needs through the Year 2030 Planning horizon. Over time, the Updated Plan would also allow new residential uses (through a mixed-use zoning overlay) on Commercial designated land uses, some which are near Cutler Elementary School (located east of SR 63). Commercial uses would generally remain along Avenue 416 and SR 63. Industrial land uses would remain in the southwest (along the abandoned railroad alignment) and southeast quadrants of the Planning Area.

- Local Regulatory Context: The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan an EIR was prepared as was a background report. The General Plan background report contained contextual environmental analysis for the General Plan. The planning period for the 2015 Housing Element is eight years (December 31, 2015 through December 31, 2023). The 2015 Housing Element (GPA 15-003) was adopted by Tulare County Board of Supervisors on November 17, 2015 (BOS Resolution # 2015-0964), and was approved (certified) by the State Department of Housing and Community Development (HCD) by letter dated December 9, 2015.

- ..Identification of Potentially Significant Impacts: Indicates that the EIR must identify potentially significant impacts consistent with CEQA Guidelines Section 15002 (h).

- ..Consideration of Significant Impacts: Indicates that the EIR must consider significant impacts consistent with CEQA Guidelines Section 15126.2.

- ..Mitigation Measures: Indicates that the EIR is required to contain mitigation measures consistent with CEQA Guidelines Section 15126.4

- ..Organization of the EIR: Summarizes the content of each Chapter in the EIR.

- ..Environmental Review Process: Summarizes steps taken prior to release of the draft EIR such as the Notice of Preparation, Scoping Meeting, and comments received from persons and/or agencies in response to the Notice of Preparation.

Chapter 2 Project Description, Objectives, and Environmental Setting

In order to orient the reader to this EIR, Chapter 2 provides an Introduction which describes the need for this EIR. The Cutler-Orosi Community Plan 2021 Update is being updated to implement the 2030 Tulare County General Plan (2012). Among the entitlements to be updated are the General Plan Amendment, changes to Zoning District Boundaries, and the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Cutler-Orosi Community 2021 Update. The total Planning Area acreage is approximately 3,154 acres.

In summary, Chapter 2 contains the following:

- Project Location: The Project will be located within the existing and proposed Urban Development Boundary of the unincorporated communities of Cutler and Orosi (Cutler-Orosi), California.
- Vicinity of Project Site: Northern Tulare County on the San Joaquin Valley floor as shown in **Figure ES-1**.
- Surrounding Land Uses: The Project area contains a mix of agricultural, residential, commercial, industrial, and public facilities (e.g., schools, sheriff and fire department substations, library, community park, etc.).
- Project Setting: Describes the proposed use, summary of facilities of the Project, construction at the site, operational parameters, and a detailed description of the Project. Regulatory Setting: Applicable statutes, rules, regulations, standards, policies, etc. of the County of Tulare, local or special districts, utilities, and State and Federal government.
- Project Objectives and Benefits: (See pages ES-7 through ES-10)

Chapter 3 Impact Analysis [of Resources]

The CEQA Guidelines includes a Checklist of resources that must be addressed in an EIR. These resources are listed earlier on page ES-1. There are 20 specific resources and a Mandatory Findings of Significance discussed in Chapter 3. The resources are discussed in separate sections of Chapter 3 and each section is structured as follows:

- Summary of Findings;
- Introduction, including Thresholds of Significance;
- Environmental Settings;
- Regulatory Settings such as applicable Federal, State, and Local laws, statutes, rules, regulations, and policies;
- Impact Evaluation including Project Impacts, Cumulative Impacts, Mitigation Measures, and Conclusion;
- Definitions and Acronyms; and
- References.

Some resources required expertise to evaluate the potential Project's impact to the resource. As such, qualified experts (consultants) prepared studies, evaluations, assessments, modeling, memoranda, etc. (studies) to quantify and/or qualify potential resource impacts. The studies are contained in Appendices A through E. Among the studies were air quality, biological resources, cultural resources (archaeological, cultural, historical, and tribal cultural), greenhouse gases, noise, and traffic.

Chapter 4 Summary of Cumulative Impacts

A critically important component of an EIR is the Cumulative Impacts discussion. Chapter 4 discusses a Cumulative Impact Analysis under CEQA; Past, Present, Probable Future Projects; and Summary of Cumulative Impacts. Whereas a project in and of itself may not result in an adverse environmental impact, its cumulative effect may. The CEQA Guidelines require a discussion of cumulative impacts per Section 15130. Discussion of Cumulative Impacts, and defines cumulative impacts per Section 15355, Cumulative Impacts, as "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

With the exception of Air Quality, Greenhouse Gas Emissions, Biological, and Hydrological resources, Chapter 4 defines Tulare County as the geographic extent of the impact analysis. The geographic area is considered the appropriate extent because:

1. The proposed Project is geographically located in Tulare County and the County of Tulare is the Lead Agency;
2. Tulare County General Plan policies apply to the proposed Project; and
3. Within the Planning Area of the proposed Cutler-Orosi Community Plan 2021 Update.

The basis for other resource specific cumulative impact analysis includes:

- Land Use Impacts are: based on the County of Tulare 2030 General Plan and the Goshen Community Plan, (GPA 92-06);
- Air Quality and Green House Gas Emissions are: based on the San Joaquin Valley Air Basin;
- Mandatory Findings of Significance are: based on the San Joaquin Valley, the State California, and the Western United States;
- Biological Resources are: based on the San Joaquin Valley, the State of California, and the Western United States; and,
- Hydrology is: based on the Tulare County, the Tulare Lake Basin, and, the Tule Lake Sub-basin aquifer.

The Summary of Cumulative Impacts section discusses mitigable and unmitigable impacts. Checklist Item criteria that would result in no impacts or less than significant impacts are discussed in the Chapter 3 and are not reiterated in Chapter 4. As noted in Chapter 4, there are no Significant and Unavoidable Impacts. Less than Significant Impacts with Mitigation are summarized in **Table 4-2**. (See Chapter 8 for a complete list of Mitigation Measures to be implemented as part of the proposed Project.)

Chapter 5 Alternatives

CEQA Guidelines Section 15126.6 requires that a reasonable range of Alternatives to the proposed Project be discussed in the EIR. The proposed Project site is the superior location. The conclusion contained in Chapter 5 is based on the criteria established for the site, an evaluation of a reasonable potential site, and the three (3) reasonable Alternatives. The three Alternatives evaluated are:

Alternative A - No Project;
Alternative B – Proposed Land Use Plan and Expansion of the UDB; and
Alternative C - Proposed Land Use Plan without expansion of the UDB.

The proposed Alternatives were analyzed based on three evaluation criteria which include each of the objectives of the Project and the assessment of the potential environmental impacts. Alternatives A and C did not meet all the evaluation criteria as identified in **Table 5-2** (Alternatives Evaluation) contained in Chapter 5. Following is a summary of Chapter 5 Alternatives:

Alternative A. No Project Alternative – This Alternative would preclude the approval and implementation of the Cutler-Orosi Community Plan. Under the No Project Alternative, the County of Tulare would be required to make planning and capital improvement decisions based on the existing (currently adopted) 1988 Cutler-Orosi Community Plan. The 1988 Cutler-Orosi Community Plan is a collection of goals, objectives, and policies for the physical development of the community. The primary purpose of the plan was to outline community goals regarding physical development and to promote the general welfare of the communities. The plan serves as

a general guide for both public and private decisions affecting the community, and provides for the overall direction, density, and type of growth consistent with the needs of the communities. As the overall Community Plan is nearly 35-years old, it is outdated and does not provide suitable directions for the public, Planning Commission, or Board of Supervisors in regards to where future growth should be directed, the alignment of new roadways, the location of various public buildings and grounds, the design of new development, and the means of financing new growth; particularly regarding the ability to qualify for public funding from agencies. Among potential funding agencies that have programs/grants available are Caltrans, San Joaquin Valley Air Pollution Control District, California Department of Water Resources, California Water Boards, Community Development Block Grants, and other agencies which require adopted plans and/or matching funds. In addition, development in the planning area would continue to be regulated by the county's zone plan for the Cutler-Orosi area. Two agricultural zones, A-1 and AE, and the RA (rural residential) zone district, pose long-term planning obstacles for Cutler-Orosi as these districts allow the creation of small lot, one-half-to-five acres in area. This type of development in and around Cutler-Orosi prevents the effective utilization of land for urban growth and conservation of agricultural land. The No Project Alternative will not eliminate the environmental impacts in this EIR. Population growth and urban development will still occur in the Cutler-Orosi planning area, even without adoption of an update to the Community Plan.

Without the adoption of the Community Plan, the County of Tulare will be required to accommodate future urban development through numerous general plan amendments, zone changes, and conditional use permits. This approach to managing urban development in a community is disjointed, inefficient, does not comply with the objectives and benefits of the project in creating a sustainable, integrated, and healthy community. For these reasons, the No Project Alternative has been rejected by the County of Tulare.

Alternative B. Proposed Land Use Plan and Expansion of the UDB – Under this scenario, the Community Plan Update encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler-Orosi Wastewater Treatment Plan. The Community Plan Update proposes an approximately 712.1-acre expansion to the existing Urban Development Boundary (UDB), and amendments to land use and zoning designations. As such, the proposed Community Plan Update will expand the existing 2,441.9-acre UDB (see Figure 3.11-3) by approximately 29.2%, for a total UDB area of approximately 3,154.0-acres. As part of this Project, the County is adopting a change to the Zoning Code to allow a Mixed Use Zoning District consistent with the General Plan's new Mixed Use land use designation. Also, the Project would result in expansion of the Updated Plan's Urban Development Boundary to accommodate projected growth and land use needs. The Community Plan also includes a Complete Streets Program, which has been developed concurrently with this process and has been found to be in consistent with the requirements of the Complete Streets Program.

Alternative C. No Expansion of UDB – Under this scenario, there would be no expansion of the current Cutler-Orosi UDB which has been in existence since 1988. This alternative would be limited to addressing land use and zoning inconsistencies. This approach is too narrow to meet the economic development objectives contained in the draft Cutler-Orosi Community Plan and would not accommodate land uses needed to further planned growth. Without expanding the UDB, the Plan fails to meet the objectives or the benefits of the Community Plan. For the reasons stated above, Alternative C No Expansion of UDB has been rejected by the County of Tulare.

As discussed in Alternatives A through C, Alternatives A and C could result in more adverse

environmental impacts as specified on the CEQA resources checklist. Therefore, the proposed Project is the Environmentally Superior Alternative.

Alternatives Eliminated From Further Consideration

The following alternative(s) were originally considered during the planning and scoping process for the proposed project, but were determined to not be viable for continued evaluation and were eliminated from further consideration:

- North Growth Alternative with Town Center south of Riggin Avenue.
- Alternative Project Location

Chapter 6 Economic, Social, & Growth Inducing Impacts

This Chapter discusses the Economic, Social, and Growth Inducing effects of the Project. It contains **Table 6-1** which provides the CEQA requirements and a summary of the impact analysis as follows:

- Economic Effects - The proposed Project will not result in negative impacts to the region. It will result in increases in economic benefits to the region over time (i.e., the Year 2030 Planning horizon). Overall, the Project will result in temporary construction-related jobs and permanent jobs in retail, highway commercial, services, and light industrial sectors. Over time, the proposed Project will result in employment of additional persons

- Social Effects - The proposed Project will not result in a disproportionate effect on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.

- Growth Inducing Effects - The proposed Project will not result in significant growth inducing impacts. The intent of the Project is to provide opportunities, such as Mixed-Use land use designations, to stimulate economic development to meet the needs of existing and future community and nearby residents. Development along the State Route 63 Corridor is anticipated to capture pass through traffic. As such, the Project will not result in new housing outside of that which is accounted for during the Year 2030 Planning horizon. Growth inducing impacts will be Less Than Significant.

The overall conclusion contained in Chapter 6 is implementation of the proposed Project will result in less than significant environmental impacts, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

Chapter 7 Immitigable Impacts

This discussion provides determinations consistent with CEQA Guidelines Sections 15126.2 (b) Environmental Effects That Cannot Be Avoided, 15126.2 (c) Irreversible Impacts, and Statement of Overriding Considerations.

This Project is not anticipated to result in a significant and unavoidable cumulative impact to any resource. As such, the cumulative impact from this Project would not have the potential to adversely impact humans and will not result in an adverse Mandatory Finding of Significance. All resource impacts have been found to be less than significant, or have been mitigated to a level considered less than significant. Based on the analysis contained in the No Environmental Impacts That Cannot Be Avoided and the No Irreversible Impact sections contained in Chapter 7, a Statement of Overriding Considerations is not necessary for any Resource. The Project's merits and objectives are discussed in the Project Description and are found to be consistent with the intent of the County of Tulare, the Tulare County General Plan 2030 Update, and the Cutler-Orosi Community Plan 2021 Update.

Thus, the Project will not result in any unavoidable and unmitigable impacts to warrant a Statement of Overriding Considerations. The findings in Chapter 7 show that all cumulative environmental effects will remain insignificant and effective mitigation can be implemented, as applicable. Tulare County concludes that mitigation measures, as applicable to an effected resource, would effectively avoid and/or mitigate all potentially significant impacts.

Chapter 8 Mitigation Monitoring and Reporting Program

A summary of the Mitigation Monitoring and Reporting Program is contained at the end of this Executive Summary. CEQA Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment. The mitigation monitoring and reporting program is required to ensure compliance during a project's implementation. Consistent with CEQA requirements, the Mitigation Monitoring and Reporting Program contained in this EIR include the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.

- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.

- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Chapter 9 EIR Preparation

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified.

The sitting Tulare County Board of Supervisors; the sitting Planning Commission; Jason T. Britt, County Administrative Officer; Reed Schenke, Tulare County Resource Management Agency Director/Environmental Assessment Officer; Michael Washam, Associate RMA Director, Aaron Bock, Assistant Director, Economic Development and Planning; Hector Guerra, Chief, Environmental Planning Division; and staff (Jessica Willis, Planner IV Environmental Planning Division; Planner IV, Cheng "Tim" Chi Planner II, Environmental Planning Division; Danielle Folk, Planner I, Environmental Planning Division; Russell Kashiwa, Planning Technician II; and Pedro Ornelas, Engineering Technician IV, Public Works Branch) are noted. Jessica Willis, Planner IV, also prepared the Air Quality and Greenhouse Gas Analysis Technical Memorandum.

This DEIR could not have been accomplished without the consulting firms that prepared technical studies to support the analyses contained herein. Live Oak Associates, Inc. prepared the Biological Evaluation; and Noise Study Report and Traffic Impact Assessments were prepared by VRPA Technologies, Inc.

SUMMARY OF POTENTIAL IMPACTS & MITIGATION MEASURES

The following is a summary of the Mitigation Monitoring and Reporting Program (MMRP). The MMRP can be found in its entirety in Chapter 8 of the DEIR

Table ES-1
Mitigation Monitoring Reporting Program Summary

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
Chapter 3.4 Biological Resources							
Construction-related Impacts to Sanford's Arrowhead							
3.4-1.a	***(Preconstruction Surveys).*** Prior to construction activities in the planning area's canals and ditches, a qualified biologist will conduct a preconstruction survey for the Sanford's arrowhead during the May-October blooming period for this species.	Prior to a project's initiation	Issuance of building permit	County of Tulare Planning and Public Works (RMA); California Department of Fish and Wildlife (CDFW)			
3.4-1.b	***(Avoidance).*** If a Sanford's arrowhead population is identified within the construction zone, it will be avoided by a minimum distance of 50 feet if possible. The avoidance area will be identified on the ground with construction fencing, brightly-colored flagging, or other easily visible means.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-1.c	***(Salvage).*** If it is not possible to avoid populations of Sanford's arrowhead identified within construction zones, a qualified biologist will remove all individual plants to be impacted and relocate them to a suitable portion of the waterway that is nearby but will not be impacted.	Prior to a project's initiation	Issuance of building permit	County of Tulare RMA and CDFW			
Construction-Related Mortality of the Western Pond Turtle. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* will be implemented.							
3.4-2	***(Pre-construction Surveys).*** Preconstruction surveys for western pond turtles must be conducted within 24 hours prior to the start of construction activities in inundated	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	canals, ditches, and basins in the planning area. These surveys will encompass all aquatic habitat and surrounding uplands within 100 feet that are proposed for impact. Any turtles that are discovered during the preconstruction surveys will be relocated to similar habitat outside of the impact area.						
Project-related Impacts to Swainson's Hawk							
3.4-3.a	***(Temporal Avoidance).*** In order to avoid impacts to nesting Swainson's hawks, construction activities in the rural zone will occur, where possible, outside the nesting season**,** typically defined as March 1-September 15.	Prior to and during construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-3.b	***(Preconstruction Surveys***). If construction activities in the rural zone must occur between March 1 and September 15, a qualified biologist will conduct preconstruction nest surveys for Swainson's hawks on and within ½ mile of the work area within 30 days prior to the start of construction. The survey will consist of inspecting all accessible, suitable trees of the survey area for the presence of nests and hawks.	Prior to and during construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-3.c	***(Avoidance of Active Nests).*** Should any active Swainson's hawk nests be discovered within the survey area, the observation will be submitted to the CNDDB, and an appropriate disturbance-free buffer will be established around the nest based on local conditions and agency guidelines. Disturbance-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until a qualified biologist has determined that the young have fledged and are capable of foraging independently.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-3.d	***(Compensatory Mitigation).*** Projects in the rural zone that will remove agricultural fields or grassland within ½ mile	During construction	Issuance of building permit	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	of a documented Swainson's hawk nest (based on concurrent Mitigation Measure 3.3.3b surveys, if applicable, and/or on a CNDDB query) will provide compensatory mitigation at a 1:1 ratio for the loss of potential Swainson's hawk foraging habitat. Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the vicinity, to be preserved in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved Swainson's hawk conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2.			and CDFW			
Project-Related Mortality of Burrowing Owl							
3.4-4.a	***(Pre-construction Surveys).*** A pre-construction "take avoidance" survey for burrowing owls will be conducted by a qualified biologist within 30 prior to the start of construction according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The survey area will include all suitable habitat on and within 200 meters of the construction zone, where accessible.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-4.b	***(Avoidance of Active Nests).*** If construction activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near the construction zone, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.						
3.4-4.c	***(Avoidance or Passive Relocation of Resident Owls).*** During the non-breeding season (September 1-January 31), resident owls occupying burrows in the construction zone may either be avoided, or passively relocated to alternative habitat. If the project applicant chooses to avoid active owl burrows within the construction zone during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing and will remain in place until a qualified biologist determines that the burrows are no longer active. If the project applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.	Prior to initiation of construction	Issuance of building permit	County of Tulare and CDFW			
3.4-4.d	***(Compensatory Mitigation).*** The project applicant will provide compensatory mitigation, at a 1:1 ratio, for all potential burrowing owl habitat removed within 600 meters of active burrowing owl burrows, as identified during the preconstruction surveys provided for in Mitigation Measure 3.3.4b. Potential burrowing owl habitat in the planning area generally includes agricultural fields (suitable for foraging), ruderal habitat (suitable for nesting), and non-native grassland habitat (suitable for nesting or foraging). Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the project vicinity, to be preserved in perpetuity under						

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved burrowing owl conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2						
Construction-Related Mortality of Nesting Raptors and Migratory Birds (Including Tricolored Blackbird, Loggerhead Shrike, and White-tailed Kite)							
3.4-5.a	***(Avoidance).*** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the planning area will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-5.b	***(Preconstruction Surveys).*** If construction must occur between February 1-August 31, a qualified biologist will conduct preconstruction surveys for active migratory bird nests within 14 days prior to the start of work. For projects within the urban zone, the survey area will encompass the work area and accessible surrounding lands within 100 feet. For projects within the rural zone, the survey area will encompass the work area and accessible surrounding lands within 300 feet.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-5.c	***(Establish Buffers).*** Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged						
Construction-Related Mortality of Roosting Bats							
3.4-6.a	**(Temporal *Avoidance*).**To avoid potential impacts to maternity bat roosts, removal of buildings, bridges, and	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	large trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.			and CDFW			
3.4-6.b	***(Preconstruction Surveys).***If removal of buildings, bridges, or large trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.	Prior to initiation of construction	Issuance of building permit	County of RMA and CDFW			
3.4-6.c	***(Minimization).*** If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-6.d	***(Avoidance of Maternity Roosts),*** If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.						
Project-Related Impacts to Riparian Habitat							
3.4-7.a	***(Tree Survey).*** Prior to project construction, a qualified biologist will survey all areas of riparian vegetation to be impacted, and will record the species, location, and diameter at breast height (DBH) of each native tree. Upon project completion, a qualified biologist will survey the site	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	to determine if any surveyed trees were removed.						
3.4-7.b	***(Revegetation).*** The project applicant will provide compensation for removal of any native riparian trees. Replacement plantings will be installed at a ratio of 3:1 for trees with a DBH between 4 and 24 inches, and at a ratio of 10:1 for trees with a DBH greater than 24 inches. A revegetation plan will be prepared for the project that will prescribe methods for planting, irrigating, and maintaining the replacement trees and identify the success criteria for the revegetation effort.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
Cultural Resources							
3.5-1	In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			
3.5-2	The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot	Prior to issuance of grading permits	Retention of professional paleontologist/ ongoing	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program

Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.	Ongoing monitoring during subsurface excavation	monitoring/ submittal of Report of Findings, if applicable				
3.5-3	Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
				Initials	**Date**	**Remarks**
contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative						

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	rejects the recommendation of the descendent.						
Hydrology & Water Quality							
3.10-1	Install water meters and adopt a use-weighted rate schedule to encourage reduced usage by the rate-payers.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-2	Retrofit homes with water-efficient faucets, showers and toilets.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-3	Limit permissible landscape area for each residence to 2,500 square feet or less.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-4	Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources).	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-5	Mandate use of native and drought-tolerant species for all landscaping.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-6	Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-7	An elevation certificate and associated flood hazard mitigation measures is required on all proposed buildings with the FEMA Zone AE.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-8	All new construction of buildings with a shaded Zone AE shall have finished floor levels elevated one (1) foot above the adjacent natural ground.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-9	An elevation certificate and associated flood hazard mitigation measures will be required on all proposed buildings within the special flood hazard area. The finished	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	floor elevations of all structures shall be elevated to at least the established base flood elevation resulting from the flood hazard study.						
Noise							
3.13-1	Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation.	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable.	County of Tulare RMA			
3.13-2	Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.						
3.13-3	To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.						
3.13-4	Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of. the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.						

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
3.13-5	To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.						
3.13-6	To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.						
3.13-7	Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.						
3.13-8	The hours of future construction on the Project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.						
Tribal Cultural Resources							
3.17-1	In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.						
3.17-3	Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendent.						

Introduction
Chapter 1

PROJECT SUMMARY

The draft Cutler-Orosi Community Plan 2021 Update (Project, Plan Update, or Update) is being updated to implement the Tulare County General Plan 2030 Update (2012). Among the entitlements to be updated are the General Plan Amendment, changes to Zoning District Boundaries, and the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Cutler-Orosi Community Update. Consistent with the General Plan and the Study Area Boundary the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary and their impacts to the environment.

On September 30, 2014, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Cutler-Orosi Community Plan. The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, generally south of Avenue 424, east of Road 116, west of Road 134, and north of Avenue 400 as shown in Attachment "Figure 2." The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Cutler-Orosi Community Plan 2021 Update components are described later in this section will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional

State Route 63 Corridor in order to implement the following General Plan goals:

a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
c) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be

improved for the following reasons:

a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network

In addition, a Complete Streets Program was approved by the Board of Supervisors in December 2016 for inclusion in the Circulation Element of this Community Plan Update. The Cutler-Orosi Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, pedestrian circulation. As indicated in the draft Community Plan Update, the following projects have been included on the Tulare County Association of Governments (TCAG) Measure R list as Complete Streets:

"Cutler

1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Road
5. First Drive – SR 63 to Road 124

Orosi

1. Avenue 413 – Road 124 to SR 63
2. Avenue 419
3. Avenue 416 – SR-63 to Dinuba
4. Road 130 (Strong interest from school district)
5. Road 124"[1]

[1] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Page 213.

The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas generally south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. "The proposed 2021 Cutler-Orosi Community Plan Update is consistent with the

The Existing Urban Development Boundary (UDB) is shown in **Figure 1-1.** Project's Planning Area, which is coterminous with the proposed Urban Development Boundary, is shown in **Figure 1-2**,

The County is proposing six (6) new land use and zoning designations (including a Mixed Use zone) and an update to the Zoning Code to include a mixed use zoning district consistent with the mixed use designation in the 2030 General Plan. As noted in Chapter 5 Alternatives, the preferred Project Alternative is Alternative B. Under this scenario, Community Plan Update encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler-Orosi Wastewater Treatment Plan. The Community Plan Update proposes an approximately 712.1-acre expansion to the existing Urban Development Boundary (UDB) to approximately 3,154 acres, and amendments to land use and zoning designations. As such, the proposed Community Plan Update will expand the existing 2,441.9-acre UDB (see Figure 3.11-3) by approximately 29.2%, for a total UDB area of approximately 3,154.0-acres. As part of this Project, the County is adopting a change to the Zoning Code to allow a Mixed Use Zoning District consistent with the General Plan's new Mixed Use land use designation. Also, the Project would result in expansion of the Updated Plan's Urban Development Boundary to accommodate projected growth and land use needs. The Community Plan also includes a Complete Streets Program, which has been developed concurrently with this process and has been found to be in consistent with the requirements of the Complete Streets Program.

PROJECT LOCATION

Cutler is generally bound by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses approximately 0.8 square miles in area. Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bound by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses approximately 2.4 square miles in area. It has direct access to/from State Route (SR) 63. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast and is not a part of this Project.

Figure 2-1 (in Chapter 2) shows the Vicinity Map; **Figure 2-2** shows the Project's Planning Area/Proposed Urban Development Boundary
.

Figure 1-1
Cutler-Orosi Existing
Urban Development Boundary (UDB)

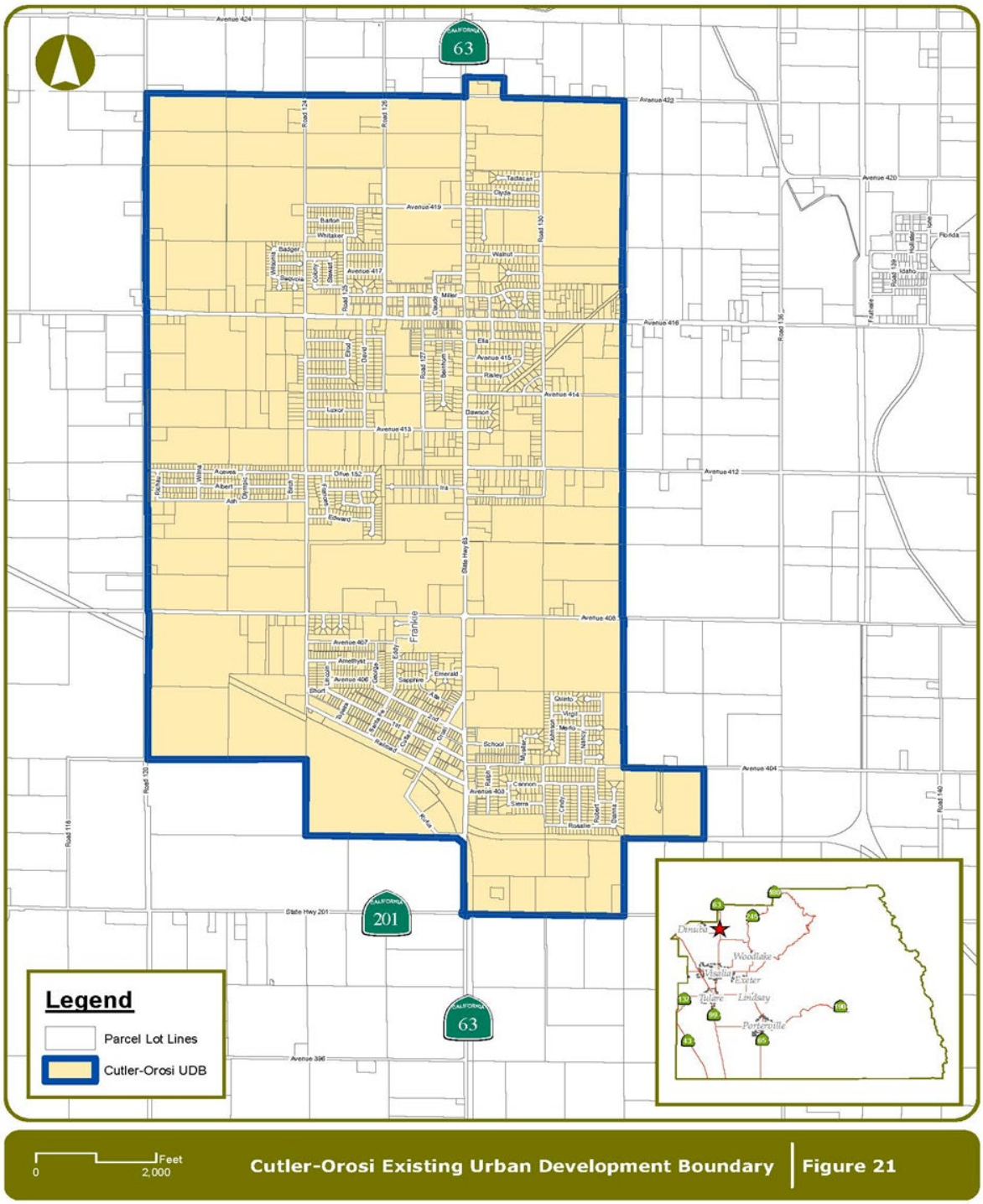
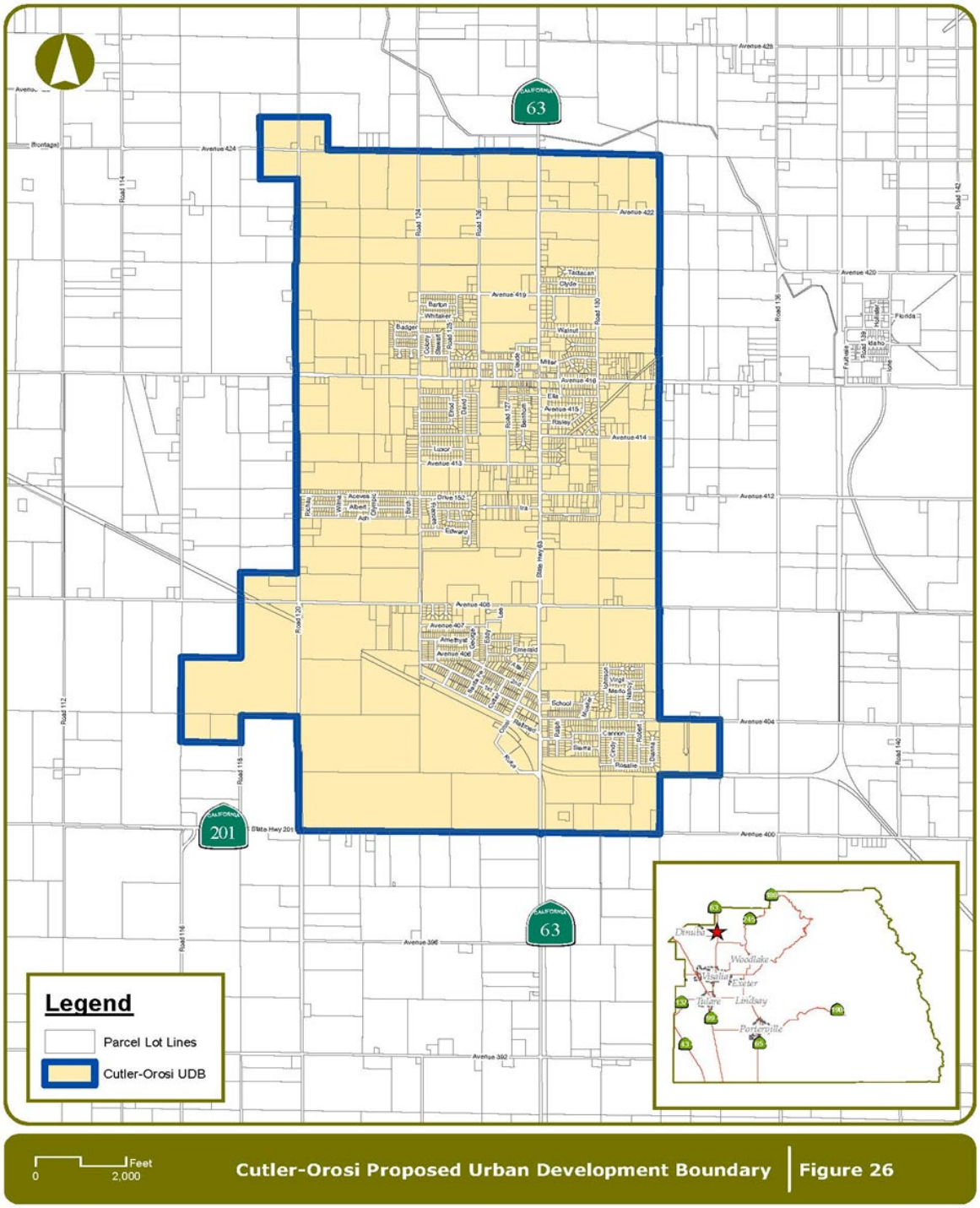


Figure 1-2
Cutler-Orosi
Proposed Urban Developed Boundary



LOCAL REGULATORY CONTEXT

The Tulare County General Plan Update 2030 (GPU) was adopted on August 28, 2012. An EIR, and background report which contained contextual environmental analyses, were prepared for the GPU. The Housing Element for 2009-2014 was adopted on May 8, 2012, and certified by the State of California Department of Housing and Community Development on June 1, 2012.

SCOPE AND METHODOLOGY

The County of Tulare has determined that a project level EIR fulfills the requirements of CEQA and is the appropriate level of evaluation to address the potential environmental impacts of the proposed project. A project level EIR is described in Section 15161 of the State CEQA Guidelines as one that examines the environmental impacts of a specific development project. A project level EIR must examine all phases of the project, including planning, construction, and operation.

This document addresses environmental impacts to the level that they can be assessed without undue speculation (CEQA Guidelines Section 15145). This *Draft Environmental Impact Report (DEIR)* acknowledges this uncertainty and incorporates these realities into the methodology to evaluate the environmental effects of the Plan, given its long term planning horizon. The degree of specificity in an EIR corresponds to the degree of specificity of the underlying activity being evaluated (CEQA Guidelines Section 15146). Also, the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project (CEQA Guidelines Sections 15151 and 15204(a)).

CEQA Guidelines Section 15002 (a) specifies that, "[t]he basic purposes of CEQA are to:

(1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
(2) Identify ways that environmental damage can be avoided or significantly reduced.
(3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
(4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved."[2]

CEQA Guidelines Section 15002 (f) specifies that, "[a]n environmental impact report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage… An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment… When

[2] CEQA Guidelines. Section 15002 (a).

the agency finds that there is no substantial evidence that a project may have a significant environmental effect, the agency will prepare a "Negative Declaration" instead of an EIR..."[3]
Pursuant to CEQA Guidelines Section 15021 Duty to Minimize Environmental Damage and Balance Competing Public Objectives:

"(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
  (1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
  (2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

(b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

(c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.

(d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment."[4]

IDENTIFICATION OF POTENTIALLY SIGNIFICANT IMPACTS

CEQA Guidelines Section 15002 (h) addresses potentially significant impacts, to wit, "CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project could cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods:

(1) Changing a proposed project;
(2) Imposing conditions on the approval of the project;
(3) Adopting plans or ordinances to control a broader class of projects to avoid the adverse changes;
(4) Choosing an alternative way of meeting the same need;
(5) Disapproving the project;
(6) Finding that changes in, or alterations, the project are not feasible;
(7) Finding that the unavoidable, significant environmental damage is acceptable as provided in Section 15093." [5] (See Chapter 7)

[3] CEQA Guidelines. Section 15002 (f).
[4] Ibid. Section 15021.
[5] Op. Cit. Section 15002 (h).

This *Draft EIR* identifies potentially significant impacts that would be anticipated to result from implementation of the proposed Project. Significant impacts are defined as a "substantial or potentially substantial, adverse change in the environment" (Public Resources Code Section 21068). Significant impacts must be determined by applying explicit significance criteria to compare the future Plan conditions to the existing environmental setting (CEQA Guidelines Section 15126.2(a)).

The existing setting is described in detail in each resource section of Chapter 3 of this document and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are also included in each resource section in Chapter 3 of this document.

CONSIDERATION OF SIGNIFICANT IMPACTS

Pursuant to CEQA Guidelines Section 15126.2, "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[6]

MITIGATION MEASURES

CEQA Guidelines Section 15126.4 specifies that:

"(1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.

(A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons

[6] Ibid. Section 15126.2.

which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR.

(B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.

(C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix F.

(D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986.)

(2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.

(3) Mitigation measures are not required for effects which are not found to be significant.

(4) Mitigation measures must be consistent with all applicable constitutional requirements, including the following:

(A) There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987); and

(B) The mitigation measure must be "roughly proportional" to the impacts of the project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measure is an ad hoc exaction, it must be "roughly proportional" to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854.

(5) If the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency's determination."[7]

[7] Ibid. Section 15126.4.

ORGANIZATION OF THE EIR

Executive Summary

The Executive Summary Chapter summarizes the analysis in this Draft Environmental Impact Report.

CHAPTER 1

Provides a brief introduction to the Environmental Analysis Required by the California Environmental Quality Act (CEQA).

CHAPTER 2

Describes the proposed Project. The chapter also includes the objectives of the proposed Project. The environmental setting is described and the regulatory context within which the proposed project is evaluated is outlined.

CHAPTER 3

Includes the Environmental Analysis by each resource. Within each resource the analysis includes the following:

Summary of Findings

Each chapter notes a summary of findings.

Introduction

Each chapter will begin with a summary of impacts, pertinent CEQA requirements, applicable definitions and/or acronyms, and thresholds of significance.

Environmental Setting

Each environmental resource analysis in Chapter 3 will outline the environmental setting for that resource. In addition, methodology is explained when complex analysis is required.

Regulatory Setting

Each environmental analysis resource in Chapter 3 will outline the regulatory setting for that resource.

Project Impact Analysis

Each evaluation criteria will be reviewed for Project-specific potential impacts.

Cumulative Impact Analysis

Each evaluation criteria will be reviewed for cumulative potential impacts.

Mitigation Measures

Mitigation Measures will be proposed as deemed applicable.

Conclusion

Each conclusion will outline whether recommended mitigation measures will, based on the impact evaluation criteria, substantially reduce or eliminate potentially significant environmental impacts. If impacts cannot be mitigated, unavoidable significant impacts will be identified.

Definitions/Acronyms

Some sub-chapters of Chapter 3 will have appropriate definitions and/or acronyms.

References

Reference documents used in each chapter are listed at the end of each sub-chapter.

CHAPTER 4

Summarizes the cumulative impacts addressed in Chapter 3.

CHAPTER 5

Describes and evaluates alternatives to the proposed Project. The proposed Project is compared to each alternative, and the potential environmental impacts of each are analyzed.

CHAPTER 6

Evaluates or describes CEQA-required subject areas: Economic Effects, Social Effects, and Growth Inducement.

CHAPTER 7

Evaluates or describes CEQA-required subject areas: Environmental Effects That Cannot be Avoided, Irreversible Impacts, and (if required) a Statement of Overriding Considerations.

CHAPTER 8

Provides a Mitigation Monitoring and Reporting Program that summarizes the environmental issues, the significant mitigation measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

CHAPTER 9

Outlines persons preparing the EIR and sources utilized in the Analysis.

APPENDICES

Following the text of this *Draft EIR*, several appendices and technical studies have been included as reference material.

ENVIRONMENTAL REVIEW PROCESS

Notice of Preparation

Pursuant to CEQA Guidelines §15082, the Notice of Preparation (NOP) for the proposed Project was circulated for review and comment beginning on April 9, 2021 and circulated for a 30-day comment period ending on May 10, 2021. Tulare County RMA received five (5) written comments on the NOP. Comments were received from the following agencies, individuals, and/or organizations:

- Regional Water Quality Control Board, e-mail indicating receipt of Notice Of Preparation, April 9, 2021.
- Gavin Mc Creary, Project Manager, Site Evaluation and Remediation Unit, Site Mitigation and Restoration Program, April 13, 2021
- Plan Review Team, Land Management, Pacific Gas and Electric Company, April 13, 2021
- Nancy Gonzalez-Lopez, Cultural Resources Analyst, Native American Heritage Commission (NAHC), April 21, 2021
- David Deel, Associate Transportation Planner, California Department of Transportation, District 6, May 18, 2021

A copy of the Amended NOP, and letters received in response to the original and amended NOP, are in Appendix A.

Consistent with CEQA Guidelines Section 15103, "Responsible and Trustee Agencies, and the Office of Planning and Research shall provide a response to a Notice of Preparation to the Lead Agency within 30 days after receipt of the notice. If they fail to reply within the 30 days with either a response or a well justified request for additional time, the lead agency may assume that none of those entitles have a response to make and may ignore a late response."[8]

The Scoping Meeting was duly noticed in a newspaper of general circulation (Visalia Times-Delta) and held on Thursday April 29, 2021 at 1:30 PM at the County of Tulare Resource Management Agency's Main Conference Room. The NOP was available for viewing viewing at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmental-impact-reports/cutler-orosi-community-plan-2021-update/. The draft Plan was made available for review at the following website link: https://tularecounty.ca.gov/rma/index.cfm/planning-building/community-plans/draft-community-plans/cutler-orosi-community-plan-2019-update/ The meeting could also have been attended online via telephone at: 1-669-900-9128, then enter 97867578291# OR via Zoom at: https://tularecounty-ca.zoom.us/j/97867578291?pwd=REpVSVhFeG8xY1lrcGc1NU9Md3RHdz09. Meeting ID: 978 6757 8291; Passcode: 079175. No comments were received at the scoping.

Section 15093 of the State CEQA Guidelines requires decision-makers to balance the benefits of a proposed project against any unavoidable adverse environmental effects of the project. If the benefits of the project outweigh the unavoidable adverse environmental effects, then the decision-makers may adopt a statement of overriding considerations, which are finding that the environmental effects are acceptable in light of the project's benefits to the public.

Draft Environmental Impact Report

As noted in CEQA Guidelines Section 15105 (a), a Draft EIR that is submitted to the State Clearinghouse shall have a minimum review period of 45 days, unless a shortened review period is approved for exceptional circumstances (CEQA, Section 15205(d)). This Draft Environmental Impact Report will be circulated publicly for a **45 day review** period beginning on **September 22, 2021**. Following completion of the 45-day public review period ending **November 5, 2021**, staff will prepare responses to comments and a Final Environmental Impact Report will be prepared. The Final Environmental Impact Report will then be forwarded to the Tulare County Tulare Planning Commission for a recommendation to the Tulare County Board of Supervisors (Board) for consideration of certification/adoption. If certified/adopted by the Board, a Notice of Determination will then be filed with the County of Tulare Clerk and also forwarded to the State of California Office of Planning and Research State Clearinghouse (OPR/SCH).

ORGANIZATIONS CONSULTED

1) **State and Federal:**
   a) California Department of Conservation, Division of Land Resource Protection
   b) California Department of Fish and Wildlife Region #4

[8] CEQA Guidelines, Section 15103

c) California Water Resources Control Board #5
d) California Department of Toxic Substance Control
e) California Environmental Protection Agency
f) California Department of Transportation (Caltrans) District #6
g) Native American Heritage Commission
h) United States Fish & Wildlife Service

2) **Local and Regional:**
   a) Tulare County Resource Management Agency:
      i) Public Works Branch
      ii) Flood Control
      iii) Fire
      iv) Planning Branch: Project Review, Environmental Planning, and Building Divisions
   b) Health and Human Services Agency, Environmental Health Services Division
   c) Goshen Community Services District
   d) Tulare County Association of Governments (TCAG)
   e) City of Visalia
   f) Visalia Unified School District
   g) Tulare County Fire Warden
   h) Tulare County Sheriff's Office
   i) San Joaquin Valley Unified Air Pollution Control District (Air District)
   j) Regional Water Quality Control Board, Central Region
   k) Pacific Gas and Electric Company
   l) Southern California Gas Company

REFERENCES

California Natural Resources Agency. California Environmental Quality Act (CEQA). Sections 15002(a), (f), and (h), 15021, 15091, 15105(a), 15093, 15103, 15126.2(a), 15126.4, 15145, 15146, 15151, 15161, 15204(a), and 15205(d). Significant Effect on the Environment. Accessed July-September 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

Tulare County General Plan 2030 Update. August 2012. Accessed at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf

Tulare County General Plan 2030 Update Background Report. February 2010. Accessed at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf.

Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR), February 2010. Accessed July-September 2021 at: http://generalplan.co.tulare.ca.us/documents.html, then access by clicking “Recirculated DEIR”.

Project Description, Setting, & Objectives Chapter 2

INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, Section 21000 et seq.), the County of Tulare Resource Management Agency (RMA) is preparing this Environmental Impact Report (EIR) to evaluate the potential environmental effects associated with a comprehensive update to the Cutler-Orosi Community Plan.

The Cutler-Orosi Community Plan was adopted by the Tulare County Board of Supervisors (BOS) on August 30, 1988 (by Resolution No. 88-1051). General Plan Amendments GPA 89-03 adopted by the BOS on November 6, 1990 by Resolution 90-1346; GPA 94-004, GPA 94-005, and GPA 95-001 on November 7, 1995 by Resolution No. 95-1272; GPA 95-005 and GPA 95-006 were adopted by the BOS on April 23, 1996 by Resolution No. 96-0335; GPA 98-004 adopted by the BOS on July 13, 1999 by Resolution No. 99-0480; GPA 00-001 adopted by the BOS on October 10, 2000 by Resolution No. 2000-771; GPA 00-005 adopted by BOS on August 27, 2002 by Resolution No. 2002-0652; and GPA 09-003 adopted by BOS on October 14, 2014 by Resolution No. 2014-0717. The 1988 Cutler-Orosi Community Plan is a collection of goals, objectives, and policies for the physical development of the community. **Figure 2-2** shows the 1988 Cutler-Orosi Urban Development Boundary (UDB) which consists of approximately 2,442 acres.

The Governor's Office of Planning and Research (OPR) States in their Planner's Guide "Specific Plans differ from area and Community Plans in the following ways:

- A specific Plan is not a component of a general Plan. It is a separately adopted general Plan implementation document.
- Specific Plans are described by statute (§65450 et seq.). There are no statutes that specify the contents of area Plans.
- The purpose of a specific Plan is the "systematic implementation" (§65450) of the general Plan. Community Plans have an emphasis on implementation. They are used to refine the policies of the general Plan relating to a defined geographic area.
- Although a specific Plan must be "prepared, adopted, and amended in the same manner as general Plans" (§65453), it may be adopted by resolution or ordinance and may be amended as often as necessary. Community and area Plans may only be adopted or amended by resolution, and the number of amendments is subject to the limits set out in §65358 for general Plan amendments.

Specific plans are required under §65451(a)(2) to identify proposed major components of infrastructure needed to support planned land uses. Community plans and area plans may, but

are not required to, contain similar analyses."[1]

The primary purpose of this Plan is to outline Community goals regarding physical development and to promote the general welfare of the Community. This Plan serves as a general guide for both public and private sector decisions affecting the Community and provides for the overall direction, density, and type of growth consistent with, and to meet with, the needs of the Community.

PROJECT LOCATION

"Cutler-Orosi are located in California's central San Joaquin Valley, in the easterly Valley floor portion of Tulare County (see Figure 1 [in the Community Plan Update, **Figure 2-1** in this Draft EIR]). The two adjacent communities lie in the midst of one of the most productive agricultural regions in the world, and are virtually surrounded by field crops, orchards, and vineyards

Tulare County is located in central California in the heart of the San Joaquin Valley. The County is composed of eight incorporated cities and numerous unincorporated communities. Most of the unincorporated communities and all of the cities are located on the Valley floor. The foothills and Sequoia and Kings Canyon National Parks form the eastern half of the County.

Cutler-Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the county seat. Both communities are located along State Route (SR) 63 about one half mile apart. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler. The communities are situated at the base of the Sierra Nevada Mountain foothills.

Cutler is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses 0.8 square miles of land **(see Figure 2-1)**. Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses 2.4 square miles of land. It is directly served by State Route (SR) 63. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast"[2].

[1] The Planner's Guide to Specific Plans. Page 5Accessed June 2021 at: https://californiareleaf.org/wp-content/uploads/2019/06/OPR-A-Planners-Guide-to-Specific-Plans.pdf
[2] Tulare County. Draft 2021 Cutler-Orosi Community Plan Update. Pages 22-23.

"Cutler is bisected north and south by SR 63. It was bounded on the south by the Atchison Topeka Santa Fe Railroad and agricultural land, on the north and east by agricultural land, and on the west by the railroad, the wastewater treatment plant and two major packinghouses. The western half of Cutler is almost fully developed, whereas the eastern half is less than 50 percent urbanized. The Atchison Topeka Santa Fe Railroad tracks that bounded Cutler to the south is now abandoned right-of-way (see Figure 3 [in the 2021 Community Plan Update]). The railroad tracks and crossties were removed. The cobble and gravel covered railbed and footprint of the former railroad are still visible. Low-lying grass and vegetation have grown in and along the railbed.

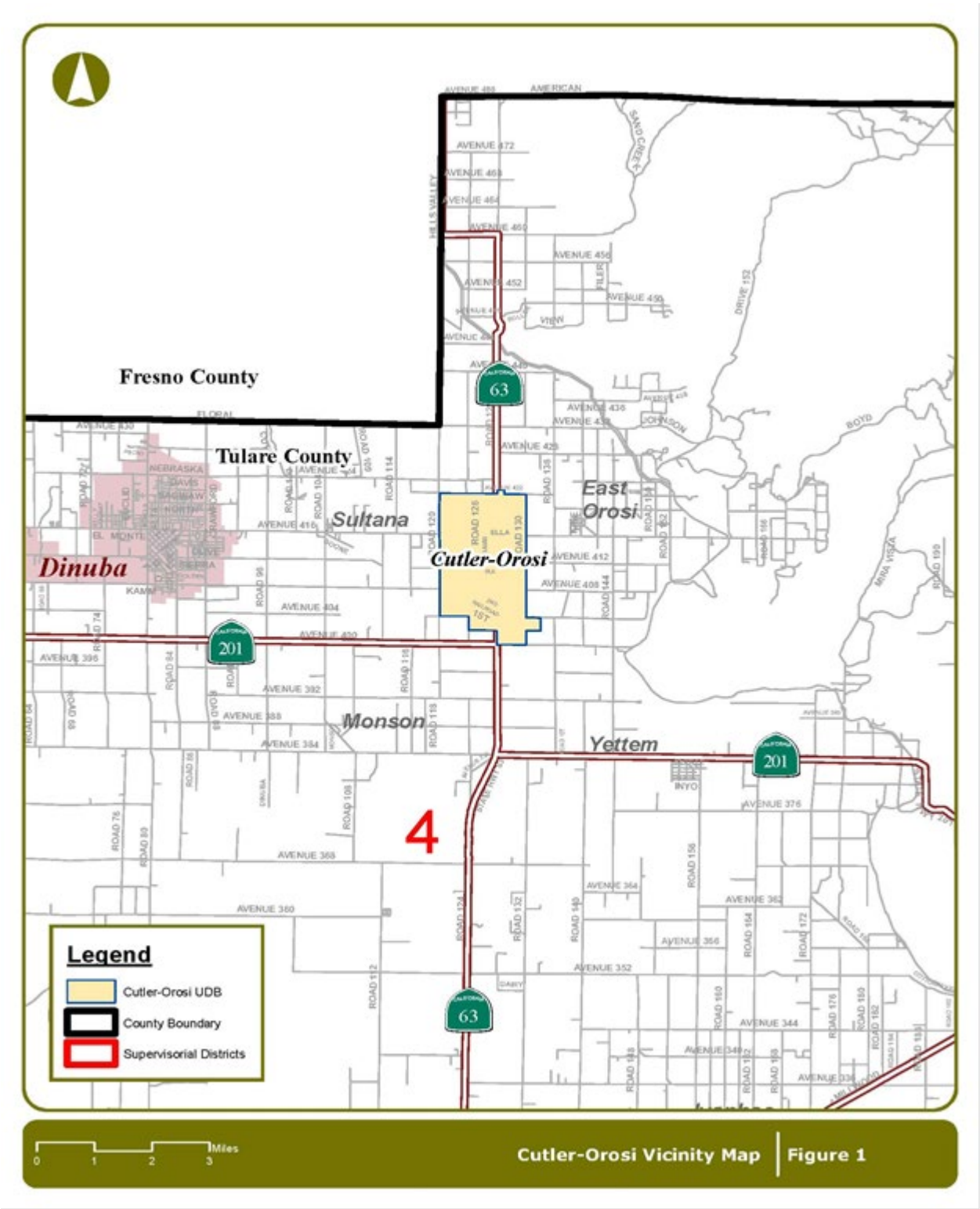
Residential development has occurred on the east side of Cutler. Development to the south and southeast has been restricted by a number of features, including the railbed footprint, the treatment plant, industry, and lands under the Williamson Act. To the north, development has historically been restricted by flooding from Sand Creek. Commercial development is concentrated along both sides of SR 63, while industrial uses are situated along the railbed footprint. Cutler Elementary School and two parks are also located on SR 63.

State Route 63 and Avenue 416 divide Orosi into four neighborhood quadrants. Each quadrant supports a mix of single family, mobile home and rural residential development. Almost all the multifamily development is located in the southwest quadrant, except the southeast, support a school. Residential development has occurred in the northeast and southwest quadrants. Development to the south and east has historically been restricted by flooding and irregularly shaped parcels, which are difficult to develop.

Orosi's commercial district is concentrated along SR 63 and the west side of Avenue 416. New Commercial development has been absent in Orosi in recent years. The proximity of Dinuba and Visalia make commercial development in Orosi somewhat risky due to competition from these neighboring communities. Orosi has little industrial development, and what little there is dispersed in the southern part of the community."[3]

[3] Ibid. 26.

Figure 2-1
Cutler-Orosi Vicinity Map



PROJECT DESCRIPTION

In December 2016, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Cutler-Orosi Community Plan. The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. "The proposed 2021 Cutler-Orosi Community Plan Update is consistent with the General Plan 2030 Update (2021) and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the following General Plan goals:

a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
c) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be improved for the following reasons:

a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

The proposed Cutler-Orosi Community Plan 2021 Update amends the 1988 Cutler-Orosi Community Plan with this proposed General Plan Amendment and implements the 2012 Tulare County General Plan 2030 Update:

Planning Framework Element (Urban Boundaries). The Planning Framework Element is revised to update the Urban Development Boundary Part 1, of the Tulare County General Plan. The intent is that the County's UDB is coterminous, as administratively feasible, with the Sphere of Influence (SOI) adopted by Tulare County Local Agency Formation Commission.

Open Space Element. The Environmental Resources Management Element is amended to revise the "Urban Expansion Area" designation on the Open Space Map Part 1, Figure 8-1 of the Tulare County General Plan to reflect the area within the revised Urban Development Boundary of Cutler-Orosi.

Land Use, Transportation and Circulation Elements Part 1. This Plan Amendment incorporates the following: The County's General Plan land use designations, circulation functional classification, and development policies into the Cutler-Orosi Community Plan 2021 Update.

Community Plan Updates Part III. The proposed Community Plan for Cutler-Orosi is updated with this proposed amendment."[4]

SURROUNDING LAND USE

The Project planning area contains a mix of agricultural, residential, commercial, industrial, and public facilities (e.g., a school, sheriff and fire department substations, a library, a community park, etc.).

[4] Op. Cit. 19-20.

The Project planning area is completely surrounded by agricultural land uses. Orchards, row crops, vineyards, and dairies are either immediately adjacent to, or close to the community. According to the Tulare County General Plan Update, agricultural products are one of the County's most important resources. Prime Farmland and Farmland of Local Importance is located within, and adjacent to, the Cutler-Orosi Planning Area.

EXISTING ZONING AND LAND USE

Table 2-1 provides the acreage for each existing Zoning Designation (District), while **Table 2-2** shows 1988 Cutler-Orosi Land Use Designations. Figures 2-2 and 2-3, show existing zoning and 1988 Land Use Designations, respectively. Proposed zoning and land use designations are shown in Tables 2-3 and 2-4; respectively. As shown in **Tables 2-2** and **2-4**, existing zoning and land use designations total approximately 2,442 acres in area. **Figures 2-2** and **2-3** shown existing zoning and land use designations; respectively.

Table 2-1 Cutler- Orosi Existing Zoning Districts[5]		
Zoning Designations	**Total Acreage**	**Percent**
AE-20	956.9	39.1
C-1	3.5	0.1
C-2	69.8	2.8
C-2-SR	23.2	0.9
C-3	55.1	2.2
C-3-SR	7.5	0.3
M-1	130.8	5.3
O	11.9	0.4
PD-C-3	5.4	0.2
P-O	16.6	0.6
P-O-SR	3.1	0.1
R-1	644.3	26.3
R-2	189.1	7.7
R-3	36.3	1.4
R-A	50.3	2.0
Z	6.8	0.2
Unclassified (Right-of-Way)	231.3	9.4
Total	**2,441.9**	**100**
Source: Tulare County GIS		

Table 2-2 1988 Cutler-Orosi Land Use Designations[6]		
Designation	**Total Acreage**	**Percent**
(blank)	8.3	0.3
General Commercial	140.4	5.7
High Density Residential	38.7	1.5
Industrial	168.3	6.8
Industrial Reserve	135.0	5.5
Low Density Residential	125.1	5.1
Medium Density Residential	850.2	34.8
Professional Office	28.6	1.17
Public Recreation	11.9	0.4
Quasi-Public	201.9	8.2
Residential Reserve	459.9	18.8
Service Commercial	42.8	1.7
Unclassified (Right-of-Way)	231.3	9.4
Total	**2,441.9**	**100**
Source: Tulare County GIS		

[5] Op. Cit. 36.
[6] Op. Cit. 34.

Figure 2-2
Existing Cutler-Orosi Zoning

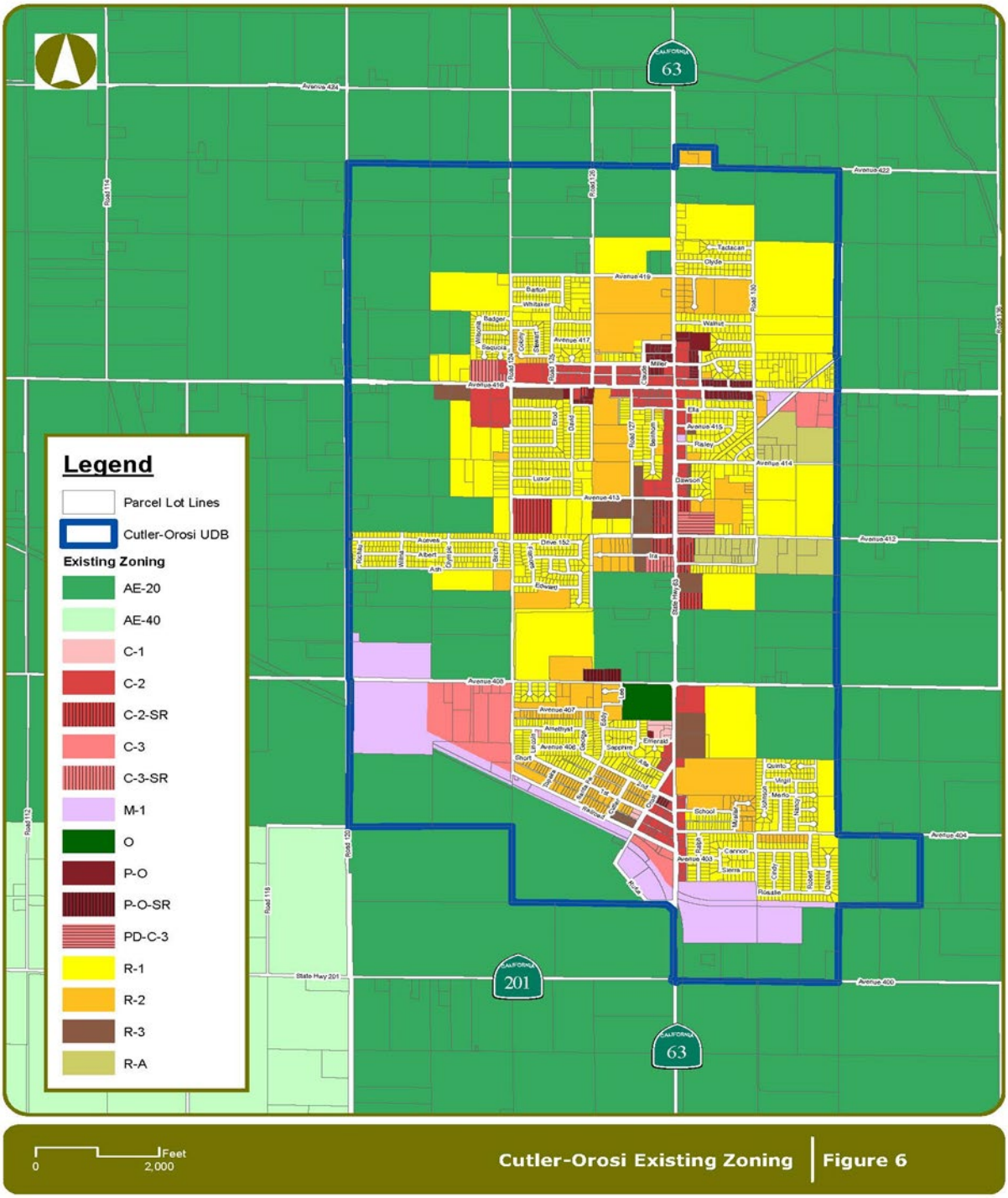
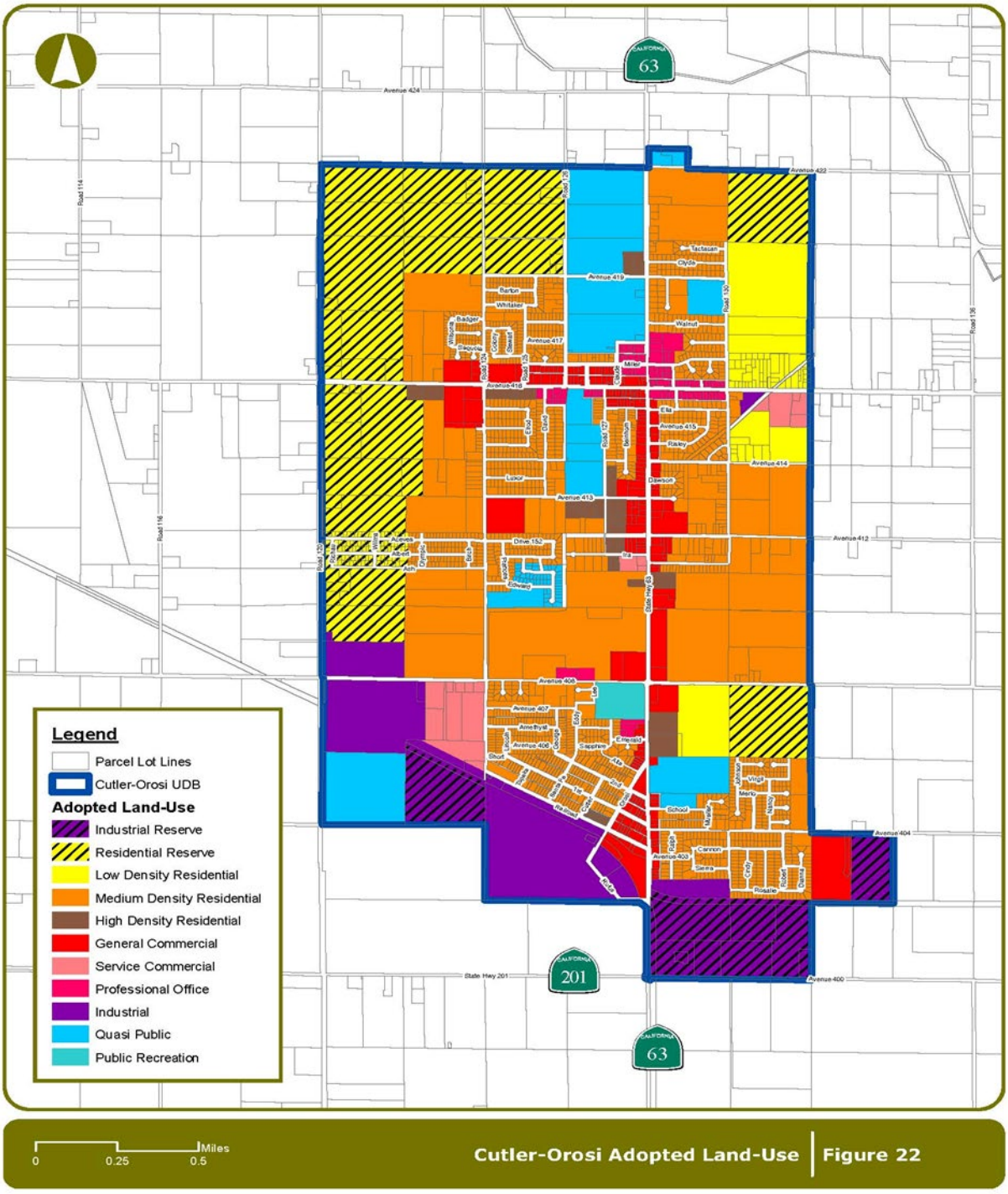


Figure 2-3
Existing/Adopted 1988 Cutler-Orosi Land Uses Plan Designations



PROPOSED ZONING AND LAND USE DESIGNATIONS

The Cutler-Orosi Community Plan Update will implement the Tulare County General Plan, and increase the probability of receiving grant funding for the community. The Proposed Rezoning Maps contemplate both increases in Economic Development and compliance with the General Plan. The Tulare County General Plan was updated in 2012 with land use and policies changes that are inconsistent with the existing land use and zoning districts within the Cutler-Orosi Urban Development Boundaries. The proposed land uses and alternative land use patterns were based on (i) expansion to the Urban Development Boundary; (ii) their impacts to the environment; (iii) to improve economic development opportunities in the Community of Cutler-Orosi; and (iv) to be consistent with the General Plan and the Study Area Boundary.

The Project will add approximately 712 acres in area resulting in approximately 3,154 acres within the updated Community Plan planning area. **Table 2-3** summarizes the proposed Zoning Districts. The proposed Zoning Districts Map for Cutler-Orosi is required to be compatible to the Land Use Map outlined in the General Plan. Zoning changes that need to occur to allow the General Plan and Zoning Ordinance to be in conformity with each other are shown in **Figure 2-4 Proposed Zoning Map**.

Table 2-3
Proposed Zoning District[7]s

Zoning Districts	Acres
AE-10	893.8
C-1	0.3
C-1-MU	0.5
C-2-MU	253.3
C-3-MU	108.1
M-1	110.3
M-1-MU	127.5
M-2	39.9
R-1	805.9
R-1-MU	23.9
R-2	405.1
R-2-MU	15.3
R-3	30.1
R-3-MU	54.4
Unclassified (Right-of-Way)	285.6
Total	**3,154.0**

Source: Tulare County GIS

[7] Op. Cit. 201.

"Proposed Zoning Districts

The **MU (Mixed Use) Overlay Combining** Zone allows a mix of uses that promotes flexibility in the types of entitlements that can be issued. All uses outlined in the M-1, C-3, C-2, C-1, R-1, R-2, and R-3 uses are allowed.

The **R-1 (One Family)** Zone allows one-family dwellings units of a permanent character placed in permanent locations and one-family manufactured homes installed on a foundation system pursuant to Section 18551 of the California Health and Safety Code which comply with Subsection G of this Section. Private garages to accommodate not more than three (3) cars.

The **R-2 (Two Family)** Zone allows any use permitted in the R-1 Zone, two-family dwellings, multiple dwellings subject to site review, and incidental and accessory uses to the aforesaid.

The **R-3 (Multiple-Family)** Zone is any use permitted in the R-2 Two-Family Zone. Multiple dwellings; provided, however, that if more than four (4) dwelling units are proposed to be constructed on one (1) lot, the construction of such units shall be subject to approval of a site plan pursuant to the procedure set forth in Paragraph 1 of Subsection G of Section 16.2 of this Ordinance.

The **C-1 (Neighborhood Commercial)** Zone is intended for retail stores and personal service businesses, which are appropriately located in close proximity to residential areas, while minimizing the undesirable impact of such uses in the neighborhoods, which they serve.

The **C-2 (General Commercial)** Zone is intended for retail stores and businesses, which do not involve manufacturing and/or processing.

The **C-3 (Service Commercial)** Zone is intended for wholesale establishments and establishments engaged in repairing and servicing equipment, materials and products, but which do not involve the manufacturing, assembling, packaging or processing of articles of merchandise for distribution and retail sales.

The **M-1 (Light Manufacturing)** Zone is intended for establishments engaged in the manufacturing, assembling, packaging, treatment and processing of products other than those which may be obnoxious or offensive by reason of emission of odor, dust, smoke, gas, noise, or other similar causes.

The **M-2 (Heavy Manufacturing)** Zone is intended for establishments engaged in the M-1 Zone, gas, boiler works, ovens, mills, canning, plastics, machining, quarry, wood processing and other similar causes.

Mixed Use - Any combination of retail/commercial, service, office, residential, hotel, or other use in the same building or on the same site typically configured in one (1) of the following ways:

- **Vertical Mixed Use**. A single structure with the above floors used for residential or office use and a portion of the ground floor for retail/commercial or service uses.
- **Horizontal Mixed Use – Attached**. A single structure which provides retail/commercial or service use in the portion fronting the public or private street with attached residential or office uses behind.
- **Horizontal Mixed Use – Detached**. Two (2) or more structures on one (1) site which provide retail/commercial or service uses in the structure(s) fronting the public or private street, and residential or office uses in separate structure(s) behind or to the side.

Mixed Use allows for a variety of development projects. By allowing the community of Cutler-Orosi to respond to market forces, more opportunities are created for economic development and job development.

The **AE-10 (Exclusive Agricultural Zone 10 Acre Minimum)** The AE-10 Zone is an exclusive zone for intensive and extensive agricultural uses and for those uses, which are a necessary and integral part of intensive and extensive agricultural operations."[8]

Proposed Land Use Plan

The proposed Land Use Designations shown in **Figure 2-5** are based on forecasted growth, the recommended Urban Development boundary, and on the economic Development/Market Analysis and Opportunities and Constraints analysis contained in the draft Community Plan Update. **Table 2-4** summarizes the land use designations and acreage, while **Figure 2-5** shows proposed Land Use Designations.

[8] Op. Cit. 201-203.

Table 2-4 Proposed Land Use Designations[9]	
Land Use	**Sum Acres**
General Commercial	237.2
High Density Residential	70.0
Light Industrial	236.4
Low-Medium Density Residential	817.8
Medium Density Residential	274.4
Mixed Use	7.3
Neighborhood Commercial	0.8
Public Recreation	11.9
Public/Quasi-Public	343.7
Service Commercial	108.1
Urban Reserve-Light Industrial	98.0
Urban Reserve-Medium Density Residential	566.0
Urban Reserve-Low Medium Density Residential	285.0
Urban Reserve-Mixed Use	77.1
Unclassified (Right-of-Way)	19.9
Total	3,154.0

"The following land use designations along with descriptions including density and intensity are recommended for Cutler-Orosi to address land demand needs through the 2030 planning horizon year.

Mixed Use (MU)

This designation establishes areas appropriate for the planned integration of some combination of retail; office; single and multi-family residential; hotel; recreation; limited industrial; public facilities or other compatible use. Mixed Use areas allow for higher density and intensity development, redevelopment, or a broad spectrum of compatible land uses ranging from a single use on one parcel to a cluster of uses. These areas are intended to provide flexibility in design and use for contiguous parcels having multiple owners, to protect and enhance the character of the area. The consideration of development proposals in Mixed Use areas should focus on compatibility between land uses, and the development potential of a given area compared to the existing and proposed mix of land uses and their development impacts. Density bonuses for residential units of 25 % to 35% may be granted, according to the Density Bonus Ordinance or State law, to Mixed Use areas to encourage the development of affordable housing units,

[9] Op. Cit. 197.

compact development in the implementation of development strategies that support the use of mass transit, reduction of air impacts, and policies.

Maximum Density: 1-30.0 Dwelling Units/Acre
Maximum Intensity: 0.5 Floor-to-Area-Ratio (FAR)

Urban Reserve (UR)

This designation establishes a holding zone whereby properties shall remain zoned for agriculture or open space use until such a time as conversion to urban uses is deemed appropriate. The UR designation shall be appended by the intended future land use designation, for example, Urban Reserve Commercial (UR) and Urban Reserve Residential (UR). When a rezoning occurs without a General Plan amendment, the UR designation shall be removed from the parcel. This designation applies primarily within UDBs.

Minimum Parcel Size: 1 Dwelling Unit per 10 Acres

Maximum Intensity: 0.02 FAR

Low Density Residential (LDR)
This designation establishes areas for single-family residences with individual homes on lots generally ranging from 12,500 square feet to one acre. Uses typically allowed include detached single-family homes; secondary dwellings; and residential support uses such as churches, schools, and other necessary public utility and safety facilities.

This designation is typically found inside communities or on the outside edge of UDBs.

Maximum Density: 1-4 Dwelling Units/Acre

Low-Medium Density Residential (LMDR)

This designation establishes areas suitable for single-family neighborhoods at relatively low densities on lots ranging from generally 5,000 to 12,500 square feet in urbanized areas. Uses typically allowed include detached single-family homes; secondary dwellings; and residential support uses such as churches, schools, parks, medical facilities, and other necessary public utility and safety facilities. This designation is used only within UDBs.

Medium Density Residential (MDR)
This land designation establishes areas for single-family and low-density multi-family dwellings. Uses typically allowed include single-family dwellings, second units, townhomes, duplexes, triplexes, and mobile home parks. This designation is used only within UDBs.

Maximum Density: 4-14 Dwelling Units/Acre

High Density Residential (HDR)

This designation established areas for multi-family dwellings in urbanized areas. Uses typically allowed include duplexes, townhouses, and apartments located near schools, parks, and other public services. This designation is used only within UDBs. Dwelling Units are based on Gross Acreage and development shall be no less than that identified as the intensity per gross acreage High Density Residential designated lands.

Maximum Density: 14-30 Dwelling Units/Acre

Neighborhood Commercial (NC)

This designation establishes areas for small-scale, general retail, and service businesses that provide goods to the immediate surrounding area. Uses typically allowed include food and beverage retail sales; limited personal, medical, professional, and repair services; and retail sales. This designation is found primarily within UDBs.

Maximum Intensity: 0.5 FAR

General Commercial (GC)

This designation establishes areas for small, localized retail, recreational, and service businesses that provide goods and services to the surrounding community. Uses typically allowed include eating and drinking establishments; food and beverage retail sales; limited personal, medical, professional services; repair services; and retail sales. Such facilities may range from a single use to a cluster of uses such as a shopping center. This designation is found primarily within UDBs.

Maximum Intensity: 0.5 FAR

Service Commercial (SC)

This designation establishes areas for service commercial uses in urbanizing areas. Uses typically allowed include automotive-related or heavy equipment sales and services; building maintenance services; construction sales and services; and warehousing. This designation is found primarily within UDBs.

Maximum Intensity: 0.5 FAR

Light Industrial (LI)

This designation establishes areas for a range of non-intensive business park, industrial park, and storage uses that do not have detrimental noise or odor impacts on surrounding urban uses. Uses typically allowed include: warehousing; welding, and fabrication shops; manufacturing and processing; and business support uses such as retail or eating establishments that serve adjacent light industrial uses and employees. This designation is found primarily within UDBs and pursuant to regional growth corridor plans and policies.

Maximum Intensity: 0.5 FAR"[10]

[10] Op. Cit. 197-199.

Figure 2-4
Proposed Cutler-Orosi Zoning

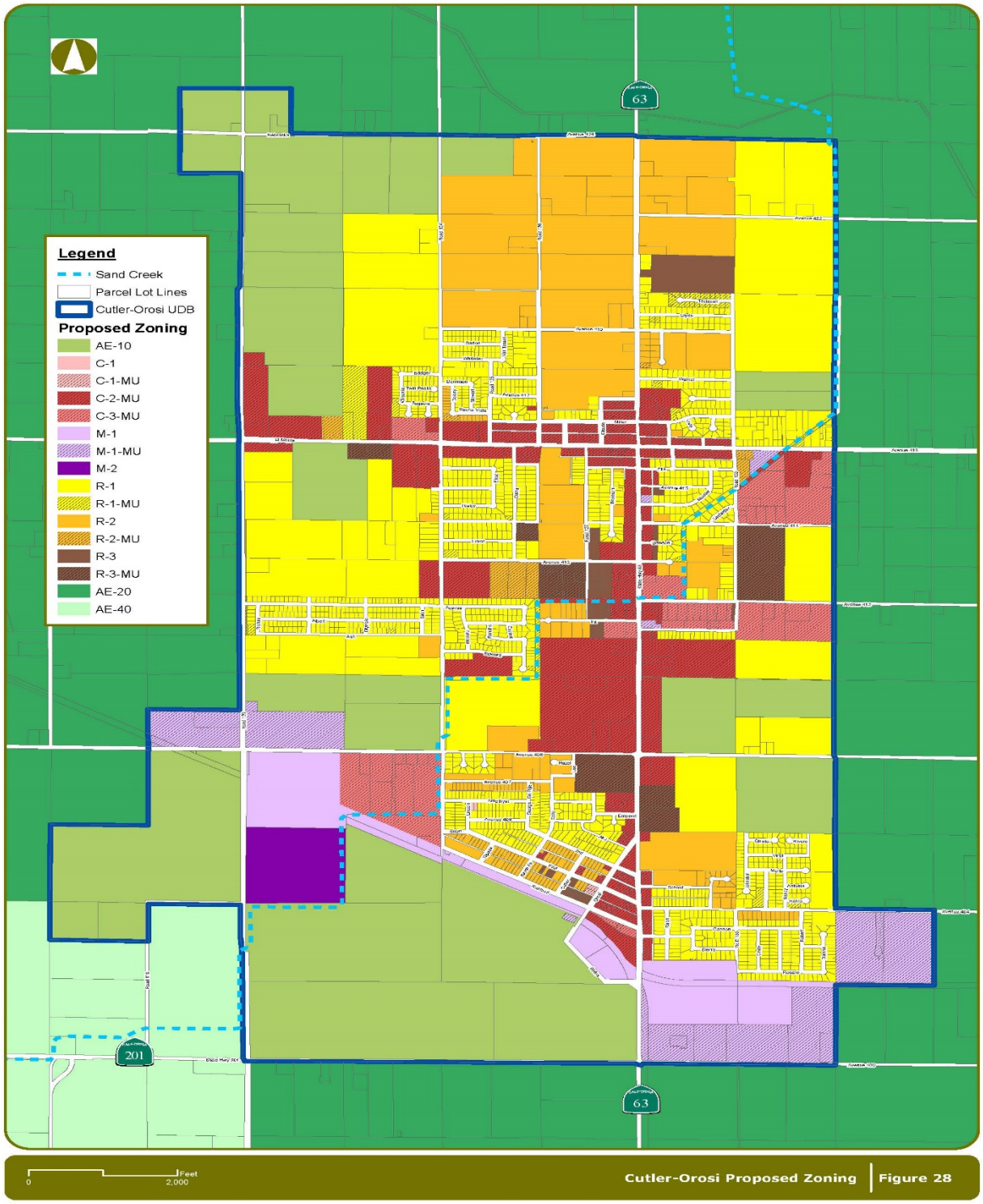
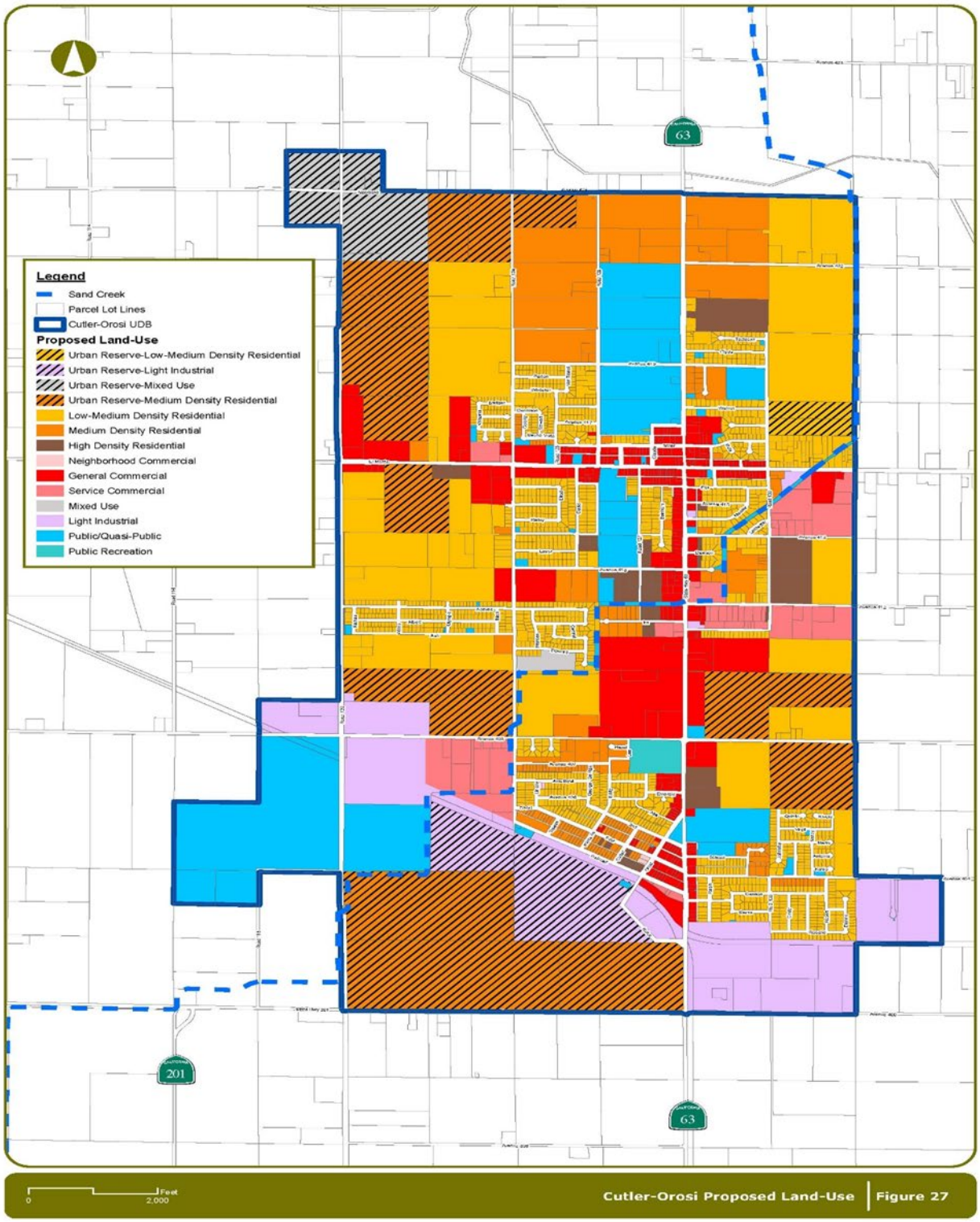


Figure 2-5
Proposed Cutler-Orosi Land Use Plan Designations



REGULATORY SETTING

State and Federal:

- Central Valley Regional Water Quality Control Board – Region #5
- San Joaquin Valley Unified Air Pollution Control District
- California Department of Conservation – Division of Land Resource Protection
- California Department of Fish and Wildlife Region #4
- California Department of Toxic Substance Control
- California Environmental Protection Agency
- California Department of Transportation District #6
- California Department of Public Health
- California Energy Commission
- California Public Utilities Commission
- Native American Heritage Commission
- United States Fish & Wildlife Services

Local:

- Cutler Public Utility District
- Orosi Public Utility District
- City of Dinuba
- Tulare County Association of Governments
- Health and Human Services Agency, Public Health Division
- Health and Human Services Agency, Environmental Health Division
- Tulare County Resource Management Agency:
  - Tulare County Flood Control Division
  - Tulare County Fire Department
  - Planning Branch (Environmental Planning, Project Review, Building and Housing Divisions)
  - Public Works Branch

PROJECT OBJECTIVES

Objective 1: Implementation of AB 32

AB 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of (GHG) emission to 1997 models by the year 2020 and implements the objectives for the Year 2050 goal.

Objective 2: Sustainability

a) Tulare County Climate Action Plan (CAP).

In light of AB 32, the County of Tulare Board of Supervisors adopted its General Plan 2030 Update on August 28, 2012, and included a Climate Action Plan (or CAP). This Climate Action Plan identifies specific General Plan policies that encourage solid waste reduction. The proposed Project was developed to support and implement the efforts made by Tulare County to address climate change through its General Plan and Climate Action Plan.

b) Tulare County General Plan (Sustainability) Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to Sustainability include the following.

PF-3.4 Mixed Use Opportunities - Unless or until a traditional plan approach is requested by the hamlet and such a plan is adopted, land use designations within the HDB shall be the mixed-use land use designations as provided in Chapter 4-Land Use that promotes the integration of a compatible mix of residential types and densities, commercial uses, public facilities and services, and employment opportunities.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long-term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development.

LU-1.8 Encourage Infill Development - The County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-7.15 Energy Conservation - The County shall encourage the use of solar power and energy conservation building techniques in all new development.

LU-7.16 Water Conservation - The County shall encourage the inclusion of "extra-ordinary' water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

LU-7.17 Shared Parking Facilities - The County shall encourage, where feasible, the use of shared parking facilities. Such areas could include developments with different day/night uses.

AQ-3.3 Street Design - The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses - The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation

TCAG Sustainable Communities Strategy (2018 Regional Transportation Plan)

"The primary objective of the 2018 RTP/SCS is to comply with applicable regulatory requirements, including federal transportation planning law, CTC Guidelines and SB 375, including SB 375's regional GHG reduction targets. TCAG's specific objectives for the 2018 RTP/SCS:

- Provide an efficient, integrated, multi-modal transportation system for the movement of people and goods that enhances the physical, economic, and social environment in the Tulare county region
- System Performance: Develop an efficient, maintained, and safe circulation network that maximizes circulation, longevity, and fiscal responsibility while minimizing environmental impacts.

- Transit: Provide a safe, secure, coordinated and efficient public transit system that can reasonably meet the needs of residents.

- Aviation: Support development of a regional system of airports that meets the air commerce and general aviation needs of the county.

- Rail: Promote safe, economical, convenient rail systems and schedules that meet the needs of passenger and freight services in the region.

- Goods Movement: Provide a transportation system that efficiently and effectively transports goods to, from, within, and through Tulare County.

- Active Transportation: Improve, enhance, and expand the region's bicycle and pedestrian systems and connectivity to those systems, while keeping them safe and convenient.

- Regional Roads and Corridors: Preserve and enhance regional transportation roads and corridors.

- Air Quality and Greenhouse Gases: Promote the improvement of air quality and GHG reductions through congestion management, coordination of land use, housing, and transportation systems, provision of alternative modes of transportation, and provision of incentives that reduce vehicle miles traveled.

- Public Health: Promote public health in the region by providing opportunities for residents to bicycle and walk to destinations such as home, work, school, medical facilities, and commercial and service businesses.

- TSM Strategies, TDM Measures, TCMS, and ITS Programs: Improve transportation mobility and operations by improving and utilizing TSM strategies, TDM measures, TCMS and ITS programs.

- Environmental Justice: Ensure that transportation investments do not discriminate on the basis of race, color, national origin, sex, age or disability.

- Emerging Technologies: Support the development and implementation of emerging technologies in the surface transportation system."[11]

"The RTP implementation strategies are compatible with the Tulare County General Plan policies."[12]

Objective 8: Lessen Significant Impacts

Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creations of additional buildings require the use of additional resources, which on a cumulative basis would increase impacts to environment in general.)

Objective 9: Physical Feasibility (Land Size and Configuration Constraints)

[11] Tulare County Association of Governments (TCAG) Regional Transportation Plan (RTP)/Sustainable Communities Strategy. SCH#20171010374. Draft Program Environmental Impact Report. May 2018. Pages 2.0-1 through 2.0-3. Prepared by Impact Sciences. Accessed June 2021 at: https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/rtp-20181/environmental-impact-report/

[12] Op. Cit. 130.

Physical feasibility is required because if a site for a particular alternative is too small, or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

Objective 10: Project Specific Elements – Overall, all elements (including Project's, Rezoning of Properties within the Study Area) were studied.

a) The County is proposing six (6) new land use and rezoning districts. These changes are reflective of updating the designations to be consistent with the land uses within the General Plan and to bring existing non-compliant properties into conformity with the Tulare County Zoning Code. This required looking at the existing properties, meetings with the Community, and review of aerial maps and County records to analyze and decide on which properties were updated.

b) Mixed Use Zone. The Cutler Orosi Community Plan includes a mixed-use zone. This Community Plan Update requires the updating the Tulare County Zoning Code to reflect a mixed-use zoning district specifically within the Goshen Community in compliance with the mixed-use designation in the 2030 General Plan.

c) Complete Streets. The Cutler-Orosi Complete Streets Program was approved by the Board of Supervisors in December, 2016 for inclusion in the Circulation Element of this Community Plan Update. The Cutler-Orosi Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The Complete Streets Program also contemplates use of alternative transportation and facilities for all users from the elderly to children and will be useful in proposing Safe Routes to School and other Public Benefit Projects in the Community.

g) As provided in greater detail in Chapter 5 Alternatives, the preferred Project Alternative is Alternative B. This scenario proposes an expansion of the UDB by 712 acres with a predominantly westerly growth focus. The UDB will also expand north of Avenue 422 by approximately ¼ mile; Residential Reserve land uses toward the northwest and northeast would be redesignated as Medium-Density Residential; additional General Commercial land uses along Avenue 418 east of Road 12 and along Avenue 418 east of Sand Creek; Industrial Reserve in the southeast quadrant would be redesignated as Light Industrial or Light Industrial Reserve would be, and Industrial Reserve areas southwest of Avenue 408 would be redesignated as Industrial Reserve and Light Industrial.

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Aesthetics
Chapter 3.1

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impact*** to Aesthetics through the Year 2030 Planning horizon. No mitigation measures will be required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the analysis as follows.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA requires that significant impacts on the environment be identified and, where possible, measures be added to minimize or eliminate impacts (CEQA Guidelines Section 15382). A "[s]ignificant effect on the environment "means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…"[1] With respect to aesthetics, potentially significant CEQA impacts include visual impacts to scenic highways, the visual character of the site, and impacts from lighting.

This section describes the existing visual environment in the Project vicinity of the Community Plan Update Project area using accepted methodologies to evaluate aesthetic/visual landscape quality and light/glare. Aesthetic considerations tend to be subjective. The methodologies used to evaluate aesthetic impacts to visual character are qualitative in nature, and are based on the physical characteristics of the Project site and surrounding area

The proposed Project site is located in the agricultural (Valley) portion of Tulare County. The "Environmental Setting" section describes scenic and aesthetic resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" section provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

[1] California Natural Resources Agency. 15382. Significant Effect on the Environment. 2015. Accessed July 2021 at: http://www.resources.ca.gov/ceqa/guidelines/art20.html

The analyses of the existing visual setting and potential visual impacts resulting from the proposed Project are based primarily on information provided by Resource Management Agency staff.

Thresholds of Significance:

- Impact on a scenic vista
- Impact on a scenic highway
- Impact on visual quality
- Creation of glare or impacts on nighttime views

ENVIRONMENTAL SETTING

Visual Character of the Region

"Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies. The western portion of the County includes a portion of the San Joaquin Valley (Valley), and is generally flat, with large agricultural areas with generally compact, interspersed towns. In the eastern portion of the County are foothills and the Sierra Nevada mountain range. The Project site is located on the Valley floor, which is very fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations, and small and medium sized manufacturing plants, make up the economic base of the Valley region. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways throughout the County, electric towers and telephone poles are noticeable. Mature trees, residential, commercial, and industrial development, utility structures, and other vertical forms are visible in the region because of the flat terrain. Where such vertical elements are absent, views are expansive. Most structures are small; usually one story in height, though occasionally two story structures can be seen at commercial or industrial (such as agricultural-industrial) complexes. The County provides a wide range of views from both mobile and stationary locations…"[2]

REGULATORY SETTING

The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County General Plan 2030 Update, the Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan Update 2030 Recirculated Draft EIR (February 2010).

Federal Agencies & Regulations

None that apply the proposed Project.

[2] County of Tulare. Page 3.1-11. Recirculated Draft, Environmental Impact Report SCH No. 2006041162. 2010. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf

State Agencies & Regulations

Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (Commission) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) on November 5, 2003 and went into effect on October 1, 2005. The changes included new requirements for outdoor lighting, which vary according to which "lighting Zone" the equipment is in. The Commission defines rural areas as Lighting Zone 2 (LZ2).[3] Existing outdoor lighting systems are not required to meet these lighting allowances. The 2013 Standards lighting standards went into effect July 1, 2014, and supersede the 2005 and 2008 Standards. In accordance with California energy commission standards, Projects that apply for a building permit on or after this date must comply with the 2013 Standards.[4]

Scenic Highway Program

The California Scenic Highway Program was established by the state Legislature in 1963 for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. [5] In Tulare County, portions of State Routes 190,198, and 180 are eligible for state scenic highway designation.[6]

Local Policy & Regulations

The Tulare County General Plan Update 2030 Part 1: Goals and Policies Report includes a number of goals and policies relating to scenic protection of County resources. The Goals and Policies Report Framework Concept No. 3 addresses Scenic Landscapes:

"The scenic landscapes in Tulare County will continue to be one of the County's most visible assets. The Tulare County General Plan emphasizes the enhancement and preservation of these resources as critical to the future of the County. The County will continue to assess the recreational, tourism, quality of life, and economic benefits that scenic landscapes provide and implement programs that preserve and use this resource to the fullest extent."[7]

[3] California Energy Commission. Page 37. 2013 Building Energy Efficiency Standards. Page 3. Accessed at: http://www.energy.ca.gov/2012publications/CEC-400-2012-004/CEC-400-2012-004-CMF-REV2.pdf

[4] California Energy Commission. 2005 Building Energy Efficiency Standards. Accessed July 2021 at: http://www.energy.ca.gov/title24/2005standards/.

[5] California Department of Transportation (Caltrans). Scenic Highway Program. Frequently Asked Questions. Accessed at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/faq.htm.

[6] County of Tulare. Tulare County General Plan 2030 Update. Designated Candidate Scenic and County Scenic Routes Figure 7-1. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf

[7] Ibid. A-2.

Scenic Roadways

"Tulare County's existing General Plan identifies State designated scenic highways and County designated eligible highways [see Figure 3.1-1]. There are three highway segments designated as eligible by the State. These include State Route 198 from Visalia to Three Rivers, State Route 190 from Porterville to Ponderosa, and State Route 180 extending through Federal land in the northern portion of Tulare County. State Route 198 closely follows around Lake Scenic Roadways

"Tulare County's existing General Plan identifies State designated scenic highways and County designated eligible highways **[see Figure 3.1-1]**. There are three highway segments designated as eligible by the State. These include State Route 198 from Visalia to Three Rivers, State Route 190 from Porterville to Ponderosa, and State Route 180 extending through Federal land in the northern portion of Tulare County. State Route 198 closely follows around Lake Kaweah and the Kaweah River, while State Route 190 follows around Lake Success and the Tule River. Both Scenic Highways travel through agricultural areas of the valley floor to the foothills and the Sierra Nevada Range.[8]

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to Projects within the County of Tulare. General Plan policies that relate to the proposed Project are listed below.

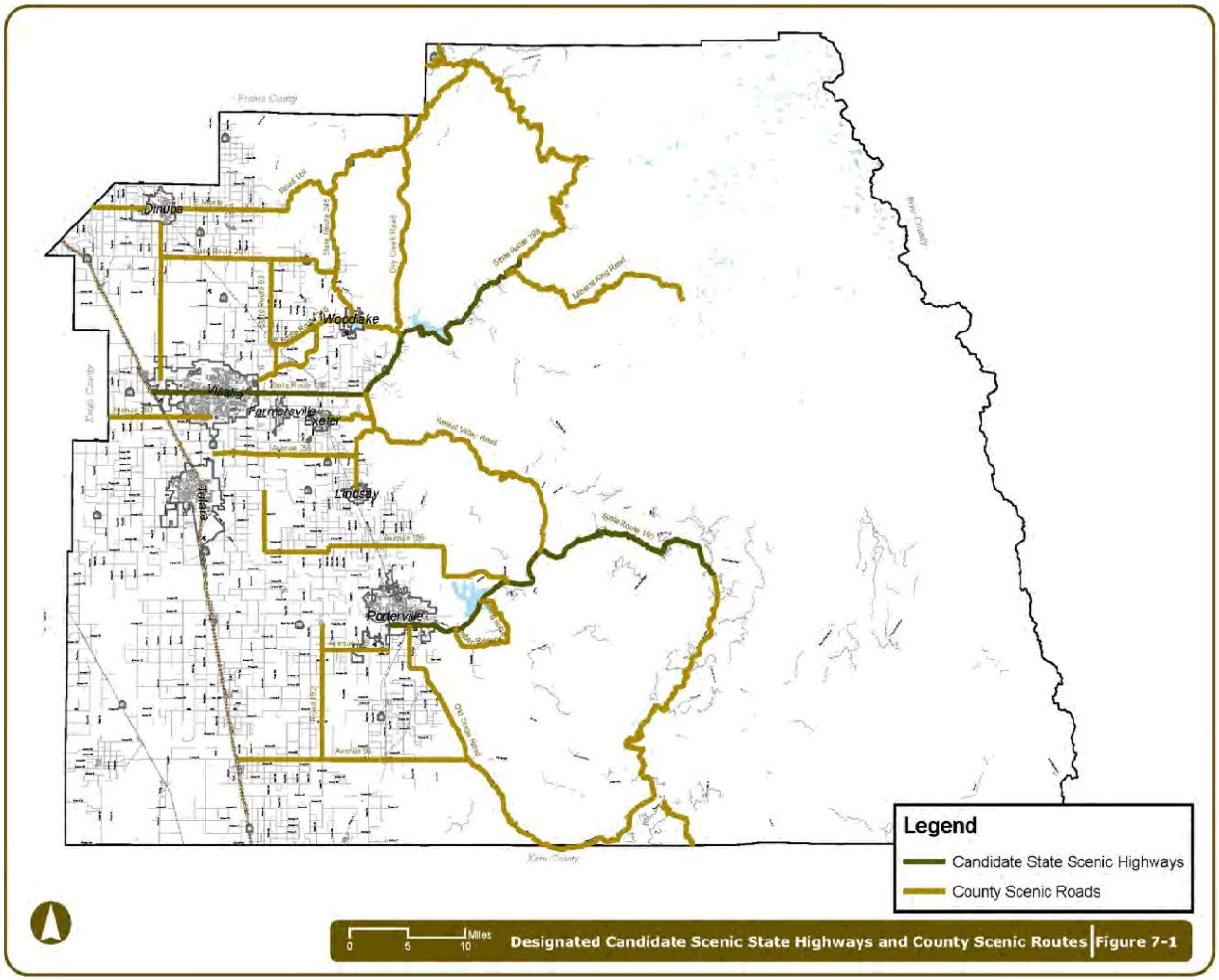
LU-5.3 Storage Screening - The County shall require adequate landscaping and screening of industrial storage areas to minimize visual impacts and enhance the quality of the environment.

LU-5.6 Industrial Use Buffer - Unless mitigated, the County shall prohibit new heavy industrial uses to a minimum of 500 feet from schools, hospitals, or populated residential areas (more than 10 dwelling units within a quarter mile diameter area). The buffer area may be used for activities not creating impacts to adjoining sensitive land uses for uses accessory to the heavy industrial use. The establishment of a buffer may not be required when mitigated or may not apply to industrial uses that do not impact adjoining uses identified herein. The buffer area shall be landscaped and maintained.

LU-7.6 Screening - The County shall require landscaping to adequately screen new industrial uses to minimize visual impacts.

[8] Tulare County of Tulare. Background Report Tulare County General Plan. Page 11-14. 2010. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

Figure 3.1-1
Scenic Highways and County Scenic Routes



LU-7.14 Contextual and Compatible Design - The County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion which is compatible with the scale of surrounding structures.

LU-7.19 Minimize Lighting Impacts - The County shall ensure that lighting in residential areas and along County roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas unless required for public safety.

SL-1.1 Natural Landscapes - During review of discretionary approvals, including parcel and subdivision maps, the County shall as appropriate, require new development to not significantly impact or block views of Tulare County's natural landscapes. To this end, the County may require new development to:

1. Be sited to minimize obstruction of views from public lands and rights-of- ways,
2. Be designed to reduce visual prominence by keeping development below ridge lines, using regionally familiar architectural forms, materials, and colors that blend structures into the landscape,
3. Screen parking areas from view,
4. Include landscaping that screens the development,
5. Limit the impact of new roadways and grading on natural settings, and,
6. Include signage that is compatible and in character with the location and building design.

SL-1.2 Working Landscapes - The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:

1. Referencing traditional agricultural building forms and materials,
2. Screening and breaking up parking and paving with landscaping, and
3. Minimizing light pollution and bright signage.

SL-2.1 Designated Scenic Routes and Highways - The County shall protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways by:

1. Requiring development within existing eligible State scenic highway corridors to adhere to land use and design standards and guidelines required by the State Scenic Highway Program,
2. Supporting and encouraging citizen initiatives working for formal designation of eligible segments of State Highway 198 and State Highway 190 as State scenic highways,
3. Formalizing a system of County scenic routes throughout the County …, and
4. Requiring development located within County scenic route corridors to adhere to local design guidelines and standards.

ERM-1.4 Protect Riparian Areas - The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans - The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.

ERM-1.6 Management of Wetlands - The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

ERM-1.8 Open Space Buffers - The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state.

ERM-5.19 Night Sky Protection - Upon demonstrated interest by a community, mountain service center, or hamlet, the County will determine the best means by which to protect the visibility of the night sky.

ERM-1.15 Minimize Lighting Impacts - The County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one-foot candle above ambient conditions.

IMPACT EVALUATION

Except as provided in Public Resources Code Section 21099, would the project:

a) Have a substantial adverse effect on a scenic vista?

Project Impact Analysis: ***No Impact***

Based on the best available information, there are no scenic vistas in the Planning Area. According to the Tulare County General Plan 2030 Update Background Report, State Route 63 is a designated Scenic Road from Visalia, north, to the intersection of State Route (SR) 63 and SR 201 at Calgro, immediately south Cutler.[9] The segment of SR 63 that proceeds north through Cutler-Orosi and on to SR 180 has not been designated a Scenic Road by the County of Tulare.[10] There are no County-designated scenic areas in the communities of Cutler or

[9] County of Tulare. Tulare County General Plan 2030 Update (2012). Designated Candidate Scenic and County Scenic Routes. Figure 7-1. Page 7-5. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf

[10] Ibid.

Orosi or the surrounding area.[11] The Planning Area is located in the Valley portion of the County, which is relatively flat. Due to its proximity, there is a view of foothills and the Sierra Nevada Mountains that can be seen to the east of the Planning Area. The Community Plan Update (Update) does not contain, nor does it call for development or construction in the Planning Area; however, the Update anticipates and would allow for such activity at a future date. Future development or construction in the Planning Area would be required to comply with local and state standards regarding potential impacts to scenic resources that might be identified in the area. Therefore, implementation of the Project will not have a significant adverse impact to a designated scenic vista. There will be ***No Impact*** to this resource through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler/Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted previously, there will be ***No Project-specific or Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Project Impact Analysis: ***No Impact***

According to the County of Tulare and the California Department of Transportation (Caltrans), there is no state scenic roadways or highways located in the Planning Area.[12] [13]

The Planning Area encompasses a variety of uses such as residential, highway commercial, light industrial, public use and agriculture (e.g., orchards and row crops). Scenic resources in this area are consistent with rural farming service centers and typically include the presence of agricultural fields, orchards, residential subdivisions, commercial retail areas, and light industrial structures.

[11] Op. Cit. Figure 11-2.

[12] County of Tulare. Tulare County General Plan 2030 Update. Page 7-5. Designated Candidate Scenic and County Scenic Routes Figure 7-1. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf

[13] Caltrans. Transportation Concept Report State Route 63, District 06. December 2014. Page 56. http://www.dot.ca.gov/d6/planning/tcrs/sr63tcr/sr63_final_tcr_december2014.pdf

There are no significant scenic resources known to exist in the immediate vicinity of the Project area. The Cutler-Orosi Planning Area is bisected in a north-south direction by SR 63 and in Orosi, in an east-west direction by Avenue 416 (El Monte Way). Neither of these roadways are designated as eligible State Scenic Highways.[14] As such, the proposed Community Plan Update will not damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or county designated scenic highway or county designated scenic road. Therefore, there will be ***No Impact*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler/Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

As noted earlier, no Project-specific impacts will occur. Therefore, ***No Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted previously, there will be ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Project Impact Analysis: ***No Impact***

The existing Cutler-Orosi Planning Area contains approximately 2,442 acres within the adopted Urban Development Boundaries (UDB). The Community Plan Update (Update) encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler/Orosi Wastewater Treatment Plan. The Plan Update proposes an approximately 712-acre expansion to the existing Urban Development Boundary (UDB), and amendments to land use and zoning designations. The proposed Plan Update will result in expansion of the existing approximately 2,442-acre UDB (see Figure 4 in the Plan Update) by approximately 29.2%, for a total UDB area of approximately 3,154 acres (see Figure 26 in the Community Plan Update and **Figure 2-5** of this Draft EIR).[15] Changes to the character of area

[14] Ibid.
[15] Draft Cutler/Orosi Community Plan 2021 Update. Page195

landscapes, however, would be gradual and the Update includes policies which would minimize impacts associated with the visual character of the area in association with proposed use and zoning requirements. Furthermore, as discussed earlier, the Update contains no plans for construction or housing developments and any such activity, at some future date, would be required to comply with local and state regulations regarding the visual character of this community and its surroundings.

Therefore, ***No Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler/Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

As the proposed Project will not create significant Project-specific visual impacts, the proposed Project will result in ***No Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon.

Mitigation Measure(s): *N**one Required.***

Conclusion: ***No Impact***

As noted previously, ***No Program-Specific and Cumulative Impacts*** related to this Checklist Item will occur.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project Impact Analysis: ***No Impact***

The Update does not contain, nor does it call for, development or construction in the Planning Area, although the Update provides allowances for such activity at a future date. Future development within the Cutler-Orosi Community Planning Area, and an expected overall increase in the intensity of development in the area, would result in additional lighting and increased light emanating from the area. Modern lighting (fixtures) will be installed with the new structures and site improvements to illuminate entries, parking areas, sidewalks, open spaces (generally for safety and security purposes), and to highlight architectural features. Compliance with General Plan Policy ERM-5.19 Night Sky Protection, and Title 24 lighting power allowances would adequately control unnecessary brightness of lighting, debilitating glare, and sky glow. Therefore, the Update would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. There will be ***No Impact*** to this resource through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler/Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

The proposed Program will not result in any significant off-site impacts. Therefore, ***No Cumulative Impacts*** related to this Checklist item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted previously, ***No Program-specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS

DEFINITIONS

Natural Landscapes - An expanse of naturally-formed scenery that contribute to the visual beauty of Tulare County.[16]

Scenic landscapes - Landscapes that include agricultural lands, woodlands, forestlands, watercourses, mountains, meadows, structures, communities, and other types of scenery that contribute to the visual beauty of Tulare County.[17]

State Scenic Highways - Scenic highways exhibit unique natural beauty viewed by travelers. California Scenic Highways may be formally designated based on criteria established in Section 260 et seq. of the Streets and Highway Code. Benefits of "scenic highway" status include protecting environmental assets that encourage tourism and inclusion on travel maps produced by the State Division of Tourism.[18]

Viewshed - An area of land, water, or other environmental features that is visible from a fixed vantage point. Viewsheds tend to be areas of particular scenic or historic value that are deemed

[16] County of Tulare. Tulare County General Plan 2030 Update. Goals and Policies Report. Page 7-1. 2012. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf

[17] Ibid. 7-2.

[18] Op. Cit.

worthy of preservation against development or other change. The preservation of viewsheds is typically the goal in the designation of open space areas, green belts, and urban separators.[19]

Working Landscapes - Landscapes shaped by human activities that produce economic commodities such as agricultural lands, ranch lands, and timber lands. They may also include picturesque commercial districts in communities, crops, orchards, agricultural structures, stands of timber, and canals.[20]

ACRONYMS

CEQA	California Environmental Quality Act
CPU	Community Plan Update
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
PUD	Public Utility District
RDEIR	Recirculated Draft Environmental Impact Report
UDB	Urban Development Boundary

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[19] Op. Cit.
[20] Op. Cit.

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Agricultural Land and Forestry Resources Chapter 3.2

SUMMARY OF FINDINGS

The proposed Cutler Orosi Community Plan Update (Project, Community Plan Update, Plan Update, or Update) will result in ***Less Than Significant Impacts With Mitigation*** to Agricultural Land and Forestry Resources through the Year 2030 planning horizon. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Agricultural Land and Forestry Resources. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to

hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Agricultural Lands and Forestry Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The California Department of Conservation identifies the location of Prime Agricultural Land resource areas and Williamson Act Contract lands. Thresholds of potential significance are established by the CEQA Checklist Item questions and include the following:

- Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
- Conflict with Williamson Act Contracts
- Convert Forest Land

ENVIRONMENTAL SETTING

"Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area."[2]

Agricultural Productivity

The Project site is located in the San Joaquin Valley portion of Tulare County. This area is characterized by rich, highly productive farmland. Agriculture is the most important sector in Tulare County's economy, and agriculture and related industries make Tulare County one of the two most productive agricultural counties in the United States, according to Tulare County Farm Bureau statistics.[3] "Agricultural lands (crop and commodity production and grazing) also provide the County's most visible source of open space lands. As such, the protection of

[1] CEQA Guidelines, Section 15126.2 (a)
[2] Tulare County General Plan 2030 Update. Recirculated DEIR. February 2010 (SCH # 2006041162). Page 3.11-5.
[3] Tulare County Farm Bureau, "Agricultural Facts," Accessed July 2021 at : http://www.tulcofb.org/index.php?page=agfacts

agricultural lands and continued growth and production of agriculture industries is essential to all County residents."[4]

The *2019 Tulare County Annual Crop and Livestock Report* stated "Tulare County's total gross production value for 2018 as $7,505,352,100. This represents an increase of $292,048,700 or 4.0% above 2018's value of $7,213,303,400. Milk continues to be the leading agricultural commodity in Tulare County; with a gross value of $1,612,070,000, a decrease of $71,677,000 or 4.3%. Milk represents 21.5% of the total crop and livestock value for 2019. Total milk production decreased by 11%. Livestock and Poultry's gross value of $665,379,000 represents a decrease of 4.2% below 2018, mostly due to a lower per unit value for cattle. The total value of all Field Crop production was $496,171,000, a decrease of 5.0% from the previous year. This decrease is mostly attributed to lower acreage for several field crops. Fruit and Nut commodities were valued at $4,555,465,000 an increase of 11.0%. This increase can be partially attributed to the increase in Almond, Pistachio, and Tangerine acreage. Nursery Products decreased by 25.1% compared to 2018 with an overall value of $72,794,000. Vegetable crops were valued at $19,929,000, representing a 15.2% increase. This can be attributed to an increase in yield in both Broccoli and Cucumbers compared to 2018.

Tulare County's agricultural strength is based on the diversity of the crops produced. The 2019 crop report covers more than 120 different commodities, 44 of which have a gross value in excess of $1,000,000. Although individual commodities may experience difficulties from year to year, Tulare County continues to produce high-quality crops that provide food and fiber to more than 96 countries throughout the world."[5]

According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP), in 2012 agricultural lands in Tulare County included 860,120 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 439,940 acres of grazing land, for a total of 1,300,060 acres of agricultural land.[6]

Important Farmland Trends

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998. Tulare County lost 13,815 acres of important farmland, and 14,424 acres of total farmland between 2010 and 2012.[7]

According to the DOC, much of Tulare County's farmland is under California Land Conservation Act (Williamson Act) contracts, a program designed to prevent premature conversion of farmland to residential or other urban uses. As of January 1, 2012, there were

[4] Tulare County General Plan 2030 Update, August 2012. Page 3-4.

[5] 2019 Tulare County Annual Crop and Livestock Report. September 2020. Cover letter from Tom Tucker, Agricultural Commissioner. Accessed at: https://agcomm.co.tulare.ca.us/ag/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2019-crop-report/.

[6] California Department of Conservation, California Farmland Conversion Report, Table A-44: Tulare County 2010-2012 Land Use Conversion. Page 72.

[7] California Department of Conservation, Division of Land Resource Protection, FMMP, "Tulare County 2008-2010 Land Use Conversion" Report, Table A-44.

1,096,299 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County. This total includes 571,904 acres of Williamson Act prime, 513,243 acres nonprime, and 11,152 acres of Farmland Security Zone lands.[8] The acreage totals also include 6,040 acres Williamson Act prime contracted land in nonrenewal and 7,513 acres of Williamson Act nonprime in nonrenewal.[9]

According to the Tulare County Subvention Report (Fiscal Year 2015-2016), much of Tulare County's farmland is under California Land Conservation Act (Williamson Act) contracts, a program designed to prevent premature conversion of farmland to residential or other urban uses. As of January 1, 2015, there were 1,097,728 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County. As presented in **Table 3.2-1** and shown in **Figure 3.2-1** (Figure 9 in the draft Community Plan Update), this total includes 565,200 acres of Williamson Act prime, 521,376 acres nonprime, and 11,152 acres of Farmland Security Zone lands. (The acreage totals also include 6,283 acres of Williamson Act prime contract land in nonrenewal and 10,848 acres of Williamson Act of nonprime contract land in nonrenewal).[10]

Table 3.2-1
2015 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts

Acres	Category
565,200	*Total prime = Prime active + NR Prime
521,376	*Total Nonprime = Nonprime active + NR Prime
11,152	Farmland Security Zone
1,097,728	TOTAL ACRES in Williamson Act and Farmland Security Zone contracts

**Prime total includes 6039.75 acres in nonrenewal; Nonprime total includes 7512.56 acres in nonrenewal.*
Source: Data compiled from 2015-2016 Tulare County Subvention Report

Important Farmland Trends

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998.[11] In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010; 13,815 acres of important farmland, and 14,216 acres of total farmland between 2010 and 2012; and 17,441 acres of important farmland, and 17,678 acres of total farmland between 2012 and 2014; and 12,547 acres of important farmland, and 13,086 acres of total farmland between 2014 and 2016.[12]

[8] California Department of Conservation. The California Land Conservation Act 2014 Status Report. Table A-1: Total Reported Enrollment 2012. Page 34 Accessed July 2021 at: http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/2014%20LCA%20Status%20Report_March_2015.pdf

[9] Ibid. Table A-5: Cumulative Nonrenewal Acreage. 38.

[10] California Department of Conservation, Division of Land Resource Protection. Farmland Mapping and Monitoring Program California Farmland Conversion Report 2015. Accessed July 2021 at: https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf.

[11] California Department of Conservation, Division of Land Resource Protection, The California Land Conservation Act of 1965 2016 Status Report. Accessed July 2021 at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf.

[12] Tulare County Land Use Conversion Tables 2008-2010, 2010-2012, 2012-2014 and 2014-2016. Table A-44. Accessed July 2021 at: http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx.

Table 3.2-2
Tulare County FMMP-Designated Land (1998-2016)

Farmland Category	Total Acres Inventoried								
	1998[13]	**2000**[14]	**2002**[15]	**2004**[16]	**2006**[17]	**2010**[18]	**2012**[19]	**2014**[20]	**2016**[21]
Prime Farmland	396,130	393,030	387,620	384,340	379,760	370,249	368,527	366,414	366,136
Farmland of Statewide Importance	357,220	351,720	345,760	339,580	332,160	323,599	321,296	320,886	322,355
Unique Farmland	11,790	11,720	12,750	12,530	12,220	11,593	11,474	11,421	11,691
Important Farmland Subtotal	**765,140**	**756,470**	**746,130**	**736,450**	**724,140**	**705,441**	**701,297**	**859,171**	**858,119**
Farmland of Local Importance	110,040	124,140	126,820	137,440	143,830	154,550	158,823	160,450	157,937
Grazing Land	439,960	434,050	440,550	440,620	440,140	440,042	439,940	439,961	439,934
Total	1,315,140	1,314,660	1,313,500	1,314,560	1,308,110	1,300,033	1,300,060	1,299,132	1,298,053

"For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer)."[22]

Forest Lands

"Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests."[23] The communities of Cutler-Orosi are generally located in the northwestern quadrant

[13] Tulare County General Plan 2030 Update Recirculated Draft EIR Sch#2006041162. Table 3.10-4.
[14] Ibid.
[15] Op. Cit.
[16] Op. Cit.
[17] Op. Cit.
[18] Tulare County Resource Management Agency. Tulare County Subvention Report for Fiscal Year 2012-2013 (submitted to Department of Conservation, November 2012).
[19] Ibid.
[20] California Department of Conservation, Division of Land Resource Protection. Department of Conservation, Farmland Mapping and Monitoring Program, *Table 2014-2016. Table A-44, Part I.* Accessed July 2021 at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx.
[21] Ibid.
[22] Tulare County 2030 General Plan RDEIR. Pages 3.10 to 3.13.
[23] General Plan Background Report. Pages 4-17.

of the valley floor in Tulare County. There are no forests or timberlands in the Community Plan Update project planning area or the surrounding areas.

Figure 3.2-1
Williamson Act Map

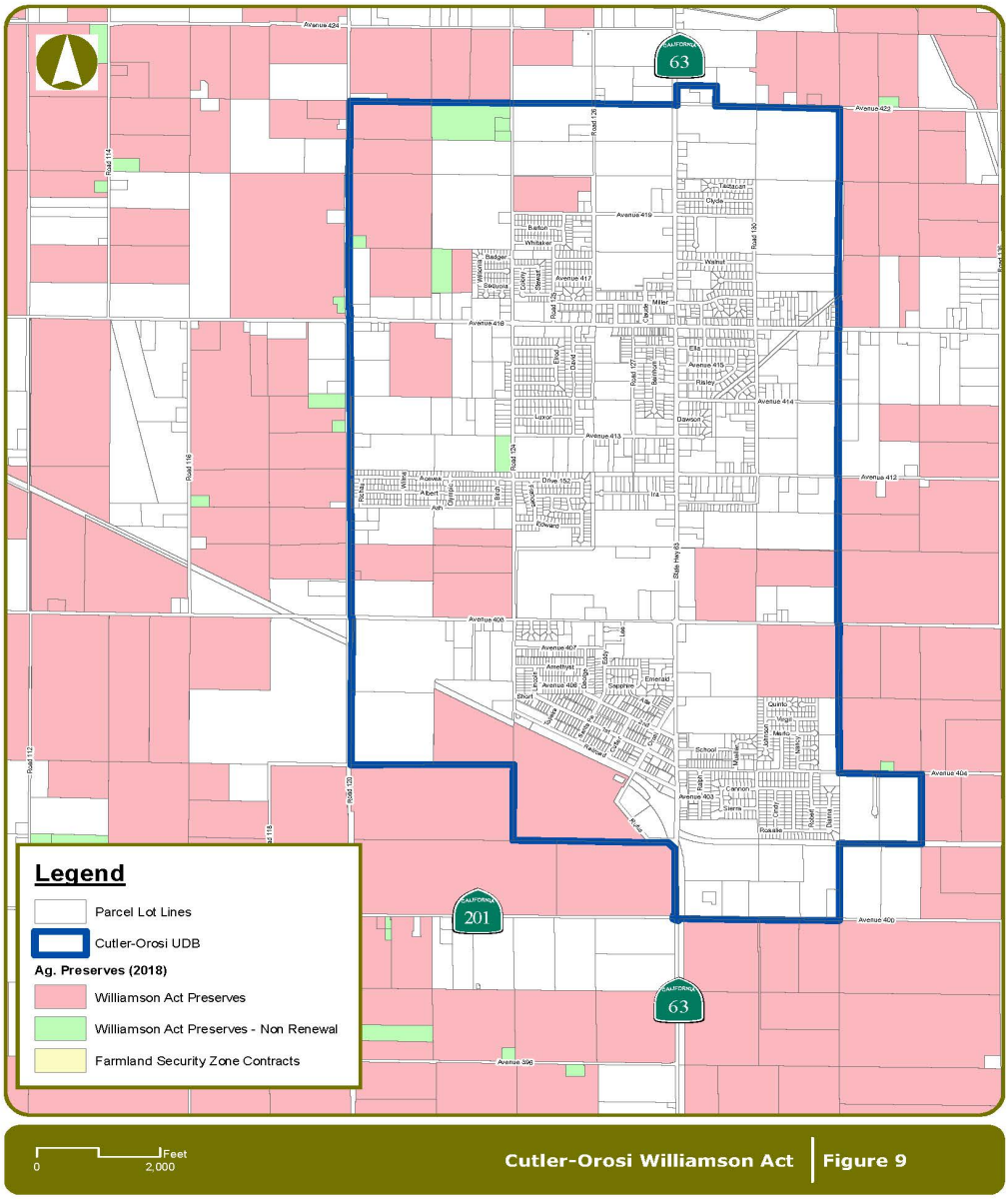
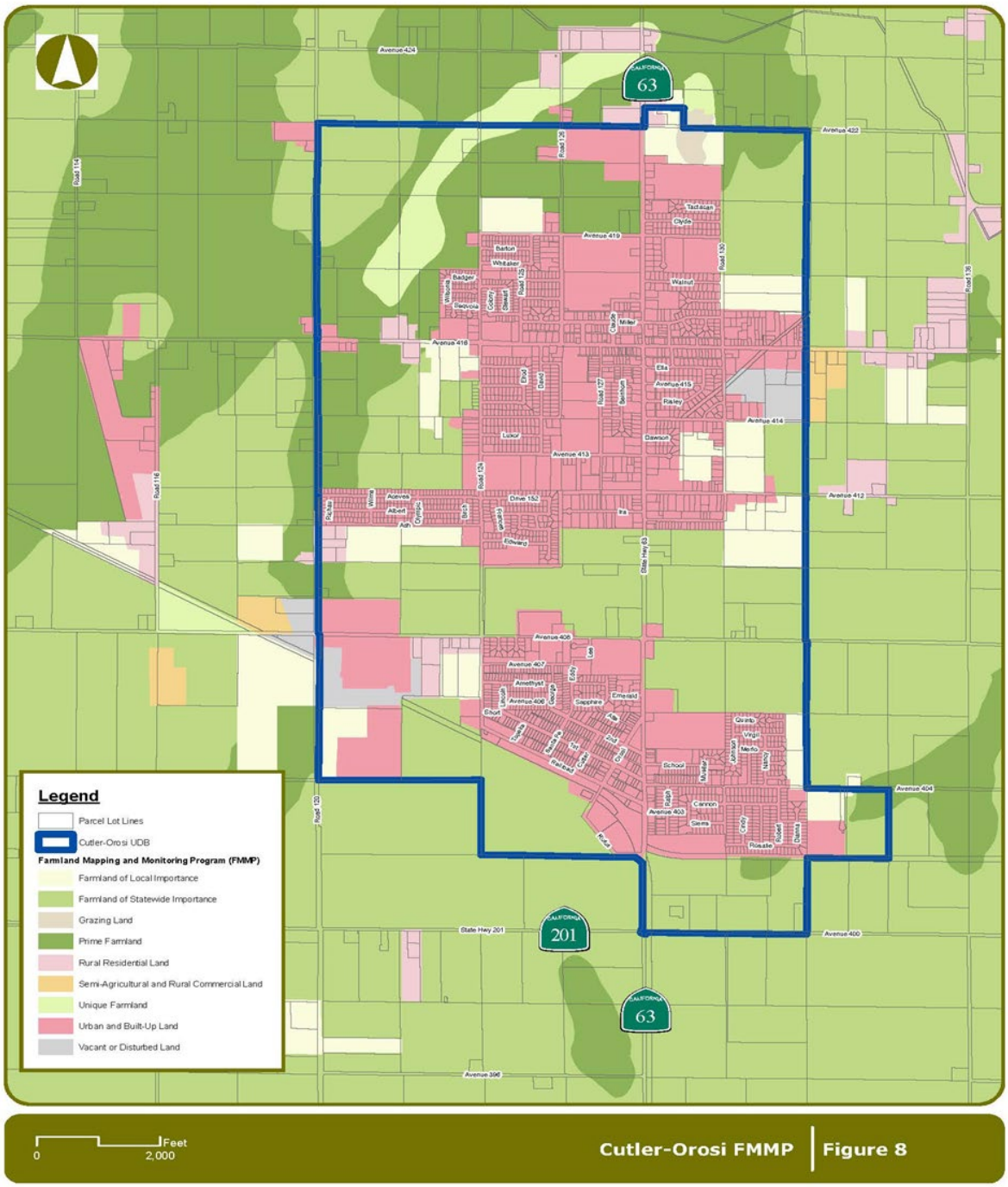


Figure 3.2-2
Farmland Mapping Monitoring Program (FMMP) Map


Legend
Parcel Lot Lines
Cutler-Orosi UDB
Farmland Mapping and Monitoring Program (FMMP)
Farmland of Local Importance
Farmland of Statewide Importance
Grazing Land
Prime Farmland
Rural Residential Land
Semi-Agricultural and Rural Commercial Land
Unique Farmland
Urban and Built-Up Land
Vacant or Disturbed Land
Avenue 424
Avenue 422
Avenue 419
Avenue 416
Avenue 415
Avenue 414
Avenue 413
Avenue 412
Avenue 407
Avenue 406
Avenue 404
Avenue 403
Avenue 400
Avenue 396
Road 114
Road 116
Road 120
Road 124
Road 125
Road 127
Road 130
Road 136
State Hwy 63
State Hwy 201
Drive 152
Feet
0
2,000
Cutler-Orosi FMMP
Figure 8

REGULATORY SETTING

Federal Agencies & Regulations

Federal Farmland Protection Act (FFPA)

"The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the Federal Government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency."[24]

US Forest Service

The U.S. Department of Agriculture, U.S. Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies to protect and manage non-federal forest and associated range and watershed lands. The Forest Service mission is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.[25]

State Agencies & Regulations

California Department of Conservation: Farmland Mapping and Monitoring Program

"The California Department of Conservation (DOC), under the Division of Land Resource Protection, has developed the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the "Important Farmland Series Maps" every two years (Department of Conservation, 2000)."[26]

[24] Federal Farmland Protection Act. Accessed July 2021 at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/alphabetical/fppa
[25] U.S. Forest Service, "About Us – Meet the Forest Service". Accessed July 2021 at: http://www.fs.fed.us/aboutus/meetfs.shtml
[26] General Plan Background Report. Page 4-12.

Williamson Act: California Land Conservation Act of 1965

"The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the "Williamson Act", enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971."[27]

California Department of Forestry and Fire Protection (CAL FIRE)

"CAL FIRE manages eight Demonstration State Forests that provide for commercial timber production, public recreation, and research and demonstration of good forest management practices. CAL FIRE foresters can be found in urban areas working to increase the number of trees planted in our cities, or preventing the spread of disease by identifying and removing infected trees. A Native American burial ground in the path of a logging operation or fire may be verified and saved due to a CAL FIRE archaeologist's review of the area. And, an improved strain of trees, resistant to disease and pests, may be nurtured and introduced by a CAL FIRE forester."[28]

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare.[29] The following General Plan policies apply to the proposed Project:

AG-1.1 Primary Land Use - The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture's real contribution to the conservation of open space and natural resources.

AG-1.3 Williamson Act - The County should promote the use of the California Land Conservation Act (Williamson Act) on all agricultural lands throughout the County located outside established UDBs. However, this policy carries with it a caveat that support for the Williamson Act as a tax reduction component is premised on continued funding of the State subvention program that offsets the loss of property taxes.

[27] Ibid. 4-13.
[28] California Department of Forestry and Fire Protection. Accessed July 2021 at: http://www.fire.ca.gov/about/about.php
[29] Tulare County General Plan 2030 Update. Part 1 – Goals and Policies Report.

AG-1.4 Williamson Act in UDBs and HDBs - The County shall support non-renewal or cancellation processes that meet State law for lands within UDBs and HDBs.

AG-1.6 Conservation Easements - The County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including "Important Farmlands"), as defined in this Element. This program may require payment of an in-lieu fee sufficient to purchase a farmland conservation easement, farmland deed restriction, or other farmland conservation mechanism as a condition of approval for conservation of important agricultural land to non-agricultural use. If available, the ACEP shall be used for replacement lands determined to be of statewide significance (Prime or other Important Farmlands), or sensitive and necessary for the preservation of agricultural land, including land that may be a part of a community separator as part of a comprehensive program to establish community separators. The in-lieu fee or other conservation mechanism shall recognize the importance of land value and shall require equivalent mitigation.

AG-1.7 Preservation of Agricultural Lands - The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth Management Plan or similar types of strategies and the identification of growth boundaries for all urban areas located in the County.

AG-1.8 Agriculture within Urban Boundaries - The County shall not approve applications for preserves or regular Williamson Act contracts on lands located within a UDB and/or HDB unless it is demonstrated that the restriction of such land will not detrimentally affect the growth of the community involved for the succeeding 10 years, that the property in question has special public values for open space, conservation, other comparable uses, or that the contract is consistent with the publicly desirable future use and control of the land in question. If proposed within a UDB of an incorporated city, the County shall give written notice to the affected city pursuant to Government Code §51233.

AG-1.9 Agricultural Preserves Outside Urban Boundaries - The County shall grant approval of individual applications for agricultural preserves located outside a UDB provided that the property involved meets the requirements of the Williamson Act and the regulations of Tulare County.

AG-1.10 Extension of Infrastructure into Agricultural Areas - The County shall oppose extension of urban services, such as sewer lines, water lines, or other urban infrastructure, into areas designated for agriculture use unless necessary to resolve a public health situation. Where necessary to address a public health issue, services should be located in public rights-of-way in order to prevent interference with agricultural operations and to provide ease of access for operation and maintenance. Service capacity and length of lines should be designed to prevent the conversion of agricultural lands into urban/suburban uses.

AG-1.11 Agricultural Buffers - The County shall examine the feasibility of employing agricultural buffers between agricultural and non-agricultural uses, and along the edges of UDBs and HDBs. Considering factors include the type of operation and chemicals used for spraying, building orientation, planting of trees for screening, location of existing and future rights-of-way (roads, railroads, canals, power lines, etc.), and unique site conditions.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

LU-2.3 Open Space Character - The County shall require that all new development requiring a County discretionary approval, including parcel and subdivision maps, be planned and designed to maintain the scenic open space character of open space resources including, but not limited to, agricultural areas, rangeland, riparian areas, etc., within the view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible and use design, construction and maintenance techniques that minimize the visibility of structures on hilltops, hillsides, ridgelines, steep slopes, and canyons.

LU-2.6 Industrial Development - Other than provided in Policy LU-2.5: Agricultural Support Facilities, the County shall, and the cities should, through their industrial development policies, approve only those agriculturally-oriented or related industries and uses that can demonstrate, whether by location and/or controlled methods of operation, that they will not adversely affect agricultural production or the County's natural resources. These uses should be located inside UDBs, HDBs, PCAs and regional growth corridors unless necessary for the support of agricultural operations or as provided in Policy LU-2.5: Agricultural Support Facilities.

Rural Valley Land Plans

For the unincorporated valley portions of Tulare County, growth is guided by the land use policies in the Rural Valley Lands Plan (RVLP)[30] and Planning Framework Element[31] of the Tulare County General Plan 2030 Update.

"Tulare County has identified land for urbanization according to four categories: 1) lands in and around incorporated cities, 2) lands in and around unincorporated communities, 3) lands in foothill development corridors, and 4) lands that qualify under the RVLP. The county is legally responsible for the planning and regulation of all lands that fall outside incorporated city limits, even though cities adopt their own general plans for the incorporated area and a portion of surrounding unincorporated area."[32]

"The RVLP applies to about 773,500 acres of the valley portion of the County, outside the planned Urban Development Boundaries (UDB) and generally below the 600-foot elevation contour line along the foothills of the Sierra Nevada Mountain Range. The purpose of the RVLP

[30] Tulare County General Plan 2030 Update, Part II – Area Plan Policies. Chapter 1 – Rural Valley Lands Plan
[31] Tulare County General Plan 2030 Update, Part I – Goals and Policies Report. Chapter 2 – Planning Framework
[32] Tulare County General Plan 2030 Update Background Report. Page 3-6.

is to protect and maintain the agricultural viability of rural valley areas by establishing requirements for exclusive agricultural zoning (containing minimum parcel sizes) appropriate to sustain agriculture and implementing a policy that utilizes resource information to determine the suitability of rural lands for nonagricultural uses. The goal of the RVLP is to "sustain the viability of Tulare County agriculture by restraining division and use of land which is harmful to continued agricultural use." The RVLP utilizes five exclusive agriculture (AE) zones, each requiring a different minimum parcel size (ranging from five to eighty acres). These zones are as follows: AE, AE-10, AE-20, AE-40, and AE-80. The number designation on each zone generally reflects the minimum acres of land needed to productively farm a certain crop at a commercial level."[33]

"In order to grant an exception for the use of the AE zone on properties that have minimal or no agricultural value, a point system is used to evaluate property suitability. Points are awarded for various factors such as parcel size, available public services, and surrounding land uses. Parcels determined to be more suitable for nonagricultural uses may be zoned (discretionary review required) for urban/suburban uses. Parcels that do not meet the requirements for rezoning are not allowed to rezone and must remain agriculturally zoned. The RVLP point system [is used] to determine whether a site is suitable to rezone from an agricultural zone on the Valley floor to an urban zone. The county shall not allow re-zoning of parcels that accumulate 17 or more points according to the RVLP Development Criteria. If the number of points accumulated is 11 or less, the parcel may be considered for nonagricultural zoning. A parcel receiving 12 to 16 points shall be determined to have fallen within a "gray" area in which no clear cut decision is readily apparent. In such instances, the Planning Commission and Board of Supervisors shall make a decision based on the unique circumstances pertaining to the particular parcel of land, including factors not covered by this system."[34]

Tulare County Agricultural Conservation Easement Program

The Tulare County Agricultural Conservation Easement Program (ACEP, see Appendix "A") was established to allow the use of agricultural easements to reduce or mitigate any significant impacts resulting from the conversion of certain agricultural land to non-agricultural uses. Resolution 2016-0323, adopted by the Tulare County Board of Supervisors on May 3, 2016, requires the use of farmland conservation easements or other farmland conservation mechanisms for projects requiring County discretionary land use entitlements and the conversion of five (5) or more acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.

"CRITERIA FOR AN EASEMENT: A "Farmland conservation easement" means for the purposes of this ACEP, an easement over agricultural land for the purpose of restricting its use for the term set forth in this resolution for primarily agricultural and agricultural-compatible uses. Any easement offered or used under this program shall, at a minimum, meet these criteria:

[33] Ibid. 3-13.
[34] Op. Cit. 3-14.

A) Preferably the easement will be located in Tulare County but other suitable land may be encumbered subject to approval by the Board of Supervisors.

B) The easement will include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency.

C) The land placed under the easement must be of substantially the same quality, have or could acquire access to water, and could otherwise be feasibly cultivated.

D) The land placed under the easement must be at a minimum of a one to one (1:1) ratio or its functional equivalent to the loss of defined agricultural lands mitigated." [35]

IMPACT EVALUATION

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?

Project Impact Analysis: ***Less Than Significant Impact***

Cutler-Orosi is generally rectangular in shape and is bisected north and south by State Route 63. As noted in the 2020 Update, the 1998 Cutler-Orosi Community Plan notes that the community was initially bounded on the south by the Atchison Topeka Santa Fe Railroad and agricultural land, on the north and east by agricultural land, and on the west by the railroad, the wastewater treatment plant and two major packinghouses. The western half of Cutler is almost fully developed, whereas the eastern half is less than 50 percent urbanized. The Atchison Topeka Santa Fe Railroad tracks that bounded Cutler to the south is now abandoned right-of-way.[36]

The existing Cutler-Orosi planning area contains approximately 2,442 acres within the adopted Urban Development Boundaries (UDB). The Community Plan Update (Project or Update) encompasses the Cutler Public Utility District and Orosi Public Utility District

[35] Tulare County Agricultural Conservation Easement Program. Pages 6 to 7.
[36] Draft Cutler-Orosi Community Plan 2021Update. Page 26.

including the Cutler-Orosi Wastewater Treatment Plan. The Community Plan Update proposes an approximately 712-acre expansion to the existing Urban Development Boundary (UDB), and amendments to land use and zoning designations. As such, the proposed Update will expand the existing approximately 2,442-acre UDB (see Figure 26 [in the Community Plan and **Figure 2-5** in this Draft EIR]) by approximately 29.2%, for a total UDB area of approximately 3,154 acres. Changes to the character of area landscapes, however, would be gradual and the Community Plan Update (CPU or Update) includes policies which would minimize impacts associated with the visual character of the area in association with proposed use and zoning requirements. Furthermore, as discussed earlier, the Update contains no plans for construction or housing developments and any such activity, at some future date, would be required to comply with local and state regulations regarding the visual character of this community and its surroundings.

The overall land use pattern will generally remain as currently defined; with the exception of those areas where the UDB will be expanded. Existing uses include a mix of residential uses (i.e., low, medium and high densities), neighborhood, general, and service commercial uses, light industrial, public/quasi-public and public recreation (i.e., schools, Cutler-Orosi PUD, and parks) which will be retained as part of the proposed land use pattern. One notable exception in the proposed land use pattern is the addition of a "Mixed-Uses" designation which "…establishes areas appropriate for the planned integration of some combination of retail; office; single and multi-family residential; hotel; recreation; limited industrial; public facilities or other compatible use. Mixed Use areas allow for higher density and intensity development, redevelopment, or a broad spectrum of compatible land uses ranging from a single use on one parcel to a cluster of uses. These areas are intended to provide flexibility in design and use for contiguous parcels having multiple owners, to protect and enhance the character of the area."[37]

The Project does not include any immediate development proposals, but its development is anticipated to populate the proposed UDB area over time. The Project may result in the ultimate conversion of fifteen parcels containing Williamson Act (WA) Preserves. Over time, parcels classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) are planned for development to non-agricultural uses. Although there are no specific development projects proposed as part of this amendment. As the agricultural area builds out, the conversion of FMMP designated important agricultural land to an urban use could result in a significant impact if not adequately mitigated.

Loss of important farmlands within unincorporated areas of the County which lie outside of Urban Development Boundaries (UDBs) is mitigated by the RVLP (General Plan Policy RVLP-1.3) on a localized level. The RVLP requires projects outside of UDBs to undertake an additional regulatory checklist (evaluation) that results in most projects deemed undevelopable outside the UDB's unless agriculturally related. However, mitigation, in the form of farmland conservation easements, are available for projects outside of UDBs which are deemed unsuitable for developable per the RVLP checklist.

[37] Ibid. 195.

Future development within portions of the FMMP map as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (see **Figure 3.2-2** [Figure 8 of the draft Community Plan Update]) of the planning area will be required to provide farmland conservation easements pursuant to the Tulare County Agricultural Conservation Easement Program (ACEP). Mitigation Measures 2-1 and 2-2 (which are included in the Mitigation Monitoring and Reporting Program (MMRP)), provides future project developers with five (5) options for securing the required easements. The options include (1) mitigation fees, (2) on-site easements, (3) off-site easements, (4) a combination of on- and off-site easements, and (5) planning development overlay.

Therefore, the Project will result in ***Less Than Significant Project-specific Impacts With Mitigation*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map provided by the California State Department of Conservation. Therefore, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***Mitigation Measures 2-1 and 2-2.***

2-1 Prior to the start of construction of any project within an "FMMP area" of the Project area, as applicable, the Applicant shall demonstrate compliance with the Tulare County *Agricultural Conservation Easement Program* (ACEP). The Applicant shall implement one (1) of the five (5) options below:

Option 1 (Mitigation Fees): Applicant(s) may submit in-lieu mitigation fees to Tulare County for the purpose of procuring agricultural lands for farmland conservation easement(s). These fees will be used by Tulare County to purchase farmland easement(s) at a minimum ratio of one to one (1:1) or its functional equivalent to the loss of define agricultural lands, on behalf of the Applicant. These easements must be of substantially the same quality, have or could acquire access to water, and could otherwise be feasibly cultivated. The easement shall protect the designated farmland in perpetuity.

Option 2 (On-site Easements): Applicant(s) may enter into a Farmland Conservation Easement Agreement with Tulare County. The on-site land placed under the easement(s) must be at a minimum of a one to one (1:1) ratio, with no less than its functional equivalent of the loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, or combination thereof, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The easement(s) shall be located in Tulare County, within the boundaries of the project site/property. The easement(s) must be of substantially the same quality, have or could

acquire access to water, and could otherwise be feasibly cultivated. The easement shall protect the designated farmland in perpetuity.

Option 3 (Off-site Easements): Applicant(s) may enter into a Farmland Conservation Easement Agreement with Tulare County. The land placed under the easement(s) must be at a minimum of a one to one (1:1) ratio, with no less than its functional equivalent of the loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, or combination thereof, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The easement(s) shall be located in Tulare County, unless otherwise agreed upon by all parties involved, including the Applicant(s), Tulare County, and/or selling Land Owner(s). The easement(s) must be of substantially the same quality, have or could acquire access to water, and could otherwise be feasibly cultivated. The easement(s) shall protect the designated farmland in perpetuity.

Option 4 (Combined On- and Off-site Easements): Applicant(s) may enter into a Farmland Conservation Easement Agreement with Tulare County. The land placed under the easement(s) must be at a minimum of a one to one (1:1) ratio, with no less than its functional equivalent of the loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, or combination thereof, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The easement(s) shall be located in Tulare County, unless otherwise agreed upon by all parties involved, including the Applicant(s), Tulare County, and/or selling Land Owner(s). The easement(s) must be of substantially the same quality, have or could acquire access to water, and could otherwise be feasibly cultivated. The easement(s) shall protect the designated farmland in perpetuity.

Option 5 (Planned Development Overlay): The Applicant(s) can enter into a Planned Development Agreement with Tulare County to establish a Planned Development Overlay for the project area. This agreement will include conditions that require all future developments to undergo a Site Plan Review, which will include mandatory mitigation, including farmland easements, for the conversion of agricultural lands.

2-2 Prior to the start of construction of any project within an "FMMP area" of the Project, as applicable, the Applicant shall demonstrate compliance with the Tulare County Agricultural Conservation Easement Program (ACEP). The Applicant shall enter into a Farmland Conservation Easement Agreement with Tulare County pursuant to the provisions and administrative protocols of the ACEP. If the Farmland Conservation Easement Agreement is approved by the Board of Supervisors, these properties shall be protected in perpetuity.

Conclusion: ***Less Than Significant Impact With Mitigation***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Project Impact Analysis: ***Less Than Significant Impact***

Development within the UDB would result in the eventual construction of residences, commercial, and industrial use, streets (and other infrastructure such as curbs, gutters, sidewalks, sewer and water collection/distribution systems, etc.), and other non-agricultural uses. Development within the UDB would occur over the planning period.

As development is anticipated to occur over time, the potential incompatibilities associated with noise, odors, and dust from agricultural activities would be intermittent and is typical of transitional areas between rural and urban interfaces. In this case, implementation of the Right-to-Farm Ordinance would give a property owner (e.g., a new home buyer), the opportunity to evaluate the personal significance of these potential minor nuisances. Furthermore, the Right-to-Farm Ordinance allows existing agricultural operations to continue, unhindered so that farmers do not have to alter their operations in accordance with future occupant's desires.

The Project will, at full build-out, result in the conversion of any prime agricultural land as defined in Section 51201(C) of the Govt. Code to non-agricultural use. Although it will initially conflict with existing zoning for agriculture use, such zoning will be superseded by zoning amendments reclassifying said zones to non-agricultural zones. Over time, it will be necessary to cancel Williamson Act (WA) Contracts on the three parcels containing WA contracts. However, by limiting expansion of the UDB, the proposed Project is not expected to encourage the non-renewal or cancellation of other nearby WA contracted lands. Therefore, ***Less Than Significant Impact*** will result from the proposed Project through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

While there are WA-contracted lands adjacent to the Project site, it is not anticipated that the proposed Project will cause the conversion of adjacent agricultural uses. Therefore, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

Project Impact Analysis: ***No Impact***

The Project site and surrounding areas are located in the Valley portion of Tulare County and have agricultural zoning. The area contains no lands zoned or identified as forest land or timberland. The proposed Project will not conflict with existing zoning for forest land or cause rezoning of forest land. As such, ***No Project-specific Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

The proposed Project is not located within a forestland zone or would require the change of a forestland zone. As such ***No Cumulative Impacts*** to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur through the Year 2030 Planning horizon.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Project Impact Analysis: ***No Impact***

As noted earlier, the proposed Project is not located within a forest land zone or will require the change of a forest land zone. As such, ***No Project-specific Impacts*** to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

As noted earlier, the proposed Project is not located within a forest land zone or will require the change of a forest land zone. As such, ***No Cumulative Impacts*** to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur through the Year 2030 Planning horizon.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?

Project Impact Analysis: ***Less Than Significant Impact***

The Project will not result in the loss of forest land or conversion of forest land to non-forest use, nor will it involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use. It could, during the planning horizon of this Community Plan, result in conversion of farmland to future non-agricultural use (e.g., industrial, commercial, and residential). However, no specific development proposals are part of this Community Plan Update. Therefore, a ***Less Than Significant Impact*** will result from the proposed Project through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

As noted earlier, the proposed Project is not anticipated to impact adjacent farmland beyond the Urban Development Boundary and no forest land exists near the Project. Therefore, ***Less Than Significant Cumulative Impacts*** to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

DEFINITIONS/ACRONYMS

Definitions

"The California Department of Conservation, Division of Land Resource Protection, maintains the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications (discussed below) and uses a minimum mapping unit size of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years. Although the program monitors a wide variety of farmland types (more fully described below), Important Farmland consists of lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland."[38]

Farmland of Local Importance (L) - Farmland of Local Importance is land important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.[39]

Farmland of Statewide Importance (S) - Farmland of Statewide Importance is similar to Prime Farmland but has minor shortcomings, such as greater slopes or a lesser ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.[40]

Grazing Land (G) - Grazing Land is land on which the vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.[41]

Other Land (X) - Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines

[38] General Plan Update RDEIR, page 3.10-4
[39] Ibid.
[40] Op. Cit.
[41] Op. Cit.

and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.[42]

Prime Farmland (P) – Prime Farmland is farmland with the best combination of physical and chemical features to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.[43]

Unique Farmland (U) - Unique Farmland has lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.[44]

Urban and Built-Up Land (D) - Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.[45]

Water (W) - Water is defined as perennial water bodies with an extent of at least 40 acres. While the number of agricultural lands classified as Important Farmlands (i.e., Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) have been decreasing over the past several years, the total acreage for all categories of farmland (including grazing land) remained relatively stable between the years 1998 and 2006 (see Table 3.10-4). The locations of these farmland types are identified in Figure 3.10-1. The farmlands are concentrated in the Rural Valley/Foothill Planning areas. No important farmlands are located in the Mountain Area.

Acronyms

ACEP	Agricultural Conservation Easement Program
CALFIRE	California Department of Forestry and Fire Protection
CLCA	California Land Conservation Act (Williamson Act)
DOC	California Department of Conservation
FPPA	Farmland Protection Policy Act
FMMP	Farmland Mapping and Monitoring Program
MMRP	Mitigation and Monitoring Program
RVLP	Rural Valley Lands Plan
THP	Timber Harvesting Plan
UDB	Urban Development Boundary

[42] Op. Cit., page 3.10-5
[43] Op. Cit., page 3.10-4
[44] Op. Cit.
[45] Op. Cit., 3.10-4 to 3.10-5.

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Air Quality
Chapter 3.3

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project) will result in ***Less Than Significant Impacts*** to Air Quality through the Year 2030 Planning Horizon. A detailed review of potential impacts is provided in the following analysis. An Air Quality and Greenhouse Gas Analysis Technical Memorandum prepared by Tulare County Resource Management Agency (RMA) staff which is included in Appendix "A" of this document and is used as the basis for determining this Project will result in ***Less Than Significant Impacts***.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Program/Project Environmental Impact Report (DEIR) addresses potential impacts to Air Quality. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazardous areas."[1]

[1] CEQA Guidelines. Section 15126.2(a). Accessed September 2021 at:

The "Environmental Setting" section provides a description of the air quality in the County. The "Regulatory Setting" section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Result in an exceedance of criteria pollutants as established in the 1990 Clean Air Act amendments.
- Result in an exceedance of San Joaquin Valley Unified Air Pollution Control District (SJVAPCD, District, or Air District) criteria pollutant threshold. (See GAMAQI Thresholds of Significance for Criteria pollutants below, Table 3.3-4)
- Result in nuisance odors.
- Result in emissions of toxic air contaminants (TAC).
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

ENVIRONMENTAL SETTING

San Joaquin Valley Air Basin

Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The San Joaquin Valley (SJV or Valley) covers the entirety of the San Joaquin Valley Air Basin (SJVAB or Air Basin) which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the valley portion of Kern counties. The SJVAB is generally shaped like a bowl.

https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC.

"The climate of the SJV is modified by topography. This creates climatic conditions that are particularly conducive to air pollution formation. …[The] SJV is surrounded by mountains on three sides and open to the Sacramento Valley and the San Francisco Bay Area to the north.

The SJVAB is the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide. The SJV is bordered by the Sierra Nevada Mountains in the east (8,000 to 14,491 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 7,981 feet in elevation). There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl shaped topography inhibits movement of pollutants out of the valley."[2]

Climate

"The SJV is in a Mediterranean Climate Zone. Mediterranean Climates Zones occur on the west coast of continents at 30 to 40 degrees latitude and are influenced by a subtropical high-pressure cell most of the year. Mediterranean Climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees F in the Valley.

The subtropical high-pressure cell is strongest during spring, summer and fall and produces subsiding air, which can result in temperature inversions in the Valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500-3,000 feet).

Winter-time high pressure events can often last many weeks with surface temperatures often lowering into the thirties degree Fahrenheit. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet."[3]

Wind Pattern

"Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and by transporting the pollution to other locations.

Especially in summer, winds in the Valley most frequently blow from the northwesterly direction. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the Valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley,

[2] San Joaquin Valley Unified Air District Pollution Control District (SJVAPCD). Guidance for Assessing and Mitigating Air Quality Impacts (GAMAGI). Page 16. Accessed September 2021 at: https://www.valleyair.org/transportation/GAMAQI.pdf.
[3] Ibid. 17.

over the Tehachapi pass, into the Southeast Desert Air Basin. The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeasterly direction and can be associated with nighttime drainage winds, prefrontal conditions and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the Valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can re-circulate a polluted air mass for an extended period. Such an eddy occurs in the Fresno area during both winter and summer."[4]

Temperature, Sunlight and Ozone Production

"Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer doesn't lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction."[5]

[4] Op. Cit. 17 to 18.
[5] Op. Cit. 18.

Temperature Inversions

"The vertical dispersion of air pollutants in the SJV can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height". This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually encountered 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor."[6]

Precipitation, Humidity and Fog

"Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the Valleys $PM_{2.5}$ and PM_{10} problem.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJV floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10}."[7]

Tulare County

Tulare County is located within the southern portion of the SJVAB. Due to the SJVAB's light and wind patterns, long periods of warm and sunny days, and surrounding mountains, air quality in the County can occur at any time of the year. The following discussion on topography and climate in the County of Tulare are taken from the Tulare County 2030 General Plan Recirculated Draft Environmental Impact Report (RDEIR).

"The topography of Tulare County significantly varies in elevation from its eastern to western borders, which results in large climatic variations that ultimately affect air quality. The western portion of the County is within the low-lying areas of the SJVAB. This portion of the County is

[6] Op. Cit. 19.
[7] Op. Cit.

much dryer in comparison to the eastern portion that is located on the slopes of the Sierra Nevada Mountains. The higher elevation contributes to both increased precipitation and a cooler climate.

Wind direction and velocity in the eastern section varies significantly from the western portion of the County. The western side receives northwesterly winds. The eastern side of the County exhibits more variable wind patterns, but the wind direction is typically up-slope during the day and down-slope in the evening. Generally, the wind direction in the eastern portion of the County is westerly; however terrain differences can create moderate directional changes."[8]

Existing Air Quality Conditions

SJVAB Attainment Status

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Current attainment designations for the SJVAB are provided in **Table 3.3-1**.

Table 3.3-1
San Joaquin Valley Air Basin Attainment Status

Pollutant	Designation	
	National	State
Ozone—1-hour	No Federal Standard	Nonattainment/Severe
Ozone—8-hour	Nonattainment/Extreme	Nonattainment
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Unclassified

Source: Air District, http://www.valleyair.org/aqinfo/attainment.htm

[8] Tulare County. General Plan 2030 Update Background Report. Page 6-12 to 6-13.

"The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone … emission standards for many years."[9] As of December 2017, the SJVAB is in nonattainment for federal and state ozone and $PM_{2.5}$ standards, attainment for federal PM_{10} standards, and nonattainment for state PM_{10} standards.

Local Air Quality Conditions

Existing local air quality conditions can be characterized by reviewing air pollution concentration data near the Project Planning Area for comparison with the NAAQS and the CAAQS. Air samples are collected continuously for some pollutants and periodically for other pollutants depending on the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of the emissions in a community. There are currently 37 active air monitoring stations in the SJVAB. Of these, there are currently four stations in Tulare County operated by various agencies: Porterville (Air District); Ash Mountain (Sequoia National Park); Lower Kaweah (Sequoia National Park); and Visalia–Church St. (ARB).[10] For pollutants not measured by any station in the project area, the next closest monitor with those emissions must be identified. The measurements made at these stations may not be representative of the Project Planning Area, but they are assumed to provide a conservative estimate for smaller communities like Cutler-Orosi.

The Visalia-Church station is the closest station to Cutler-Orosi and is representative of the community. This station measures ozone (O_3), particulate matter (PM), and nitrogen dioxide (NO_2) emissions. There are no monitoring stations in Tulare County that measure carbon monoxide (CO) and sulfur dioxide (SO_2). The nearest stations currently monitoring these pollutants are located in Fresno County: the Fresno-Garland and Fresno-Foundry Park sites in Fresno, and the Clovis-N. Villa Avenue site in Clovis.[11] Historically the Fresno-First St. station recorded this data; however this site last recorded SO_2 emissions in 2011 and CO emissions in 2012. **Table 3.3-2** summarizes the published air monitoring data from 2018 through 2020 (except where noted), which is the most recent data available. The amount over the standards and the number of days each year that the standards were exceeded provide an indicator of the severity of the air quality problems in the local area

Table 3.3-2. Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2018	2019	2020
Ozone (O_3)	1-hour	State Max 1-hour (ppm)[1]	0.112	0.093	*0.127*

[9] Tulare County General Plan 2030 Update. RDEIR. Page 3.3-9.

[10] SJVAPCD. 2021 Air Monitoring Network Plan. Figure 1, Page 2. Accessed September 2021 at: https://valleyair.org/aqinfo/Docs/2021-Air-Monitoring-Network-Plan.pdf.

[11] ARB. Almanac Resources, Air Quality Data Monitoring. Accessed September 2021 at: https://ww2.arb.ca.gov/resources/documents/almanac-resources.

Table 3.3-2. Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2018	2019	2020
		Days > State Standard (0.09 ppm)	8	0	7
	8-hour	State Max 8-hour (ppm)	0.095	0.082	0.103
		Days > State Standard (0.07 ppm)	53	22	36
		National Max 8-hour (ppm)	0.094	0.082	0.102
		Days > National Standard (0.070 ppm)	58	26	37
Inhalable coarse particulate matter (PM_{10})	Annual	State Average ($\mu g/m^3$)	52.0	46.3	60.5
		National Average ($\mu g/m^3$)[2]	*52.5*	*45.7*	*59.4*
	24 hour	State 24-hour ($\mu g/m^3$)	159.6	418.5	305.7
		Days > State Standard (50 µg/m3)	164.4	115.8	157.0
		National 24-hour ($\mu g/m^3$)	153.4	411.1	317.4
		Days > National Standard (150 $\mu g/m^3$)	0	5.0	20.2
Fine particulate matter ($PM_{2.5}$)	Annual	State Average ($\mu g/m^3$)	17.4	12.3	ID
		National Average ($\mu g/m^3$)	17.3	12.9	19.6
	24-hour	State 24-hour ($\mu g/m^3$)	96.2	47.2	136.1
		National 24-hour ($\mu g/m^3$)	86.8	47.2	127.1
		Days > National Standard (35 $\mu g/m^3$)	42.3	19.9	51.2
Carbon monoxide (CO)	8-hour	Max 8-hour (ppm)	Unavailable	Unavailable	Unavailable
		Days > State and National Standards (9 ppm)	Unavailable	Unavailable	Unavailable
Nitrogen dioxide (NO_2)	Annual	State Average (ppb)	10	9	9
	1-hour	State Max 1-hour (ppb)	69	70	53
		Days > State Standard (180 ppb)	0	0	0
		National Max 1-hour (ppb)	69.2	70.7	53.4
		Days > National Standard (100 ppb)	0	0	0
Sulfur dioxide (SO_2)	Annual	State Average (ppm)	Unavailable	Unavailable	Unavailable
	24-hour	Max 24-hour (ppm)	Unavailable	Unavailable	Unavailable

Abbreviations: ppm = parts per million; ppb = parts per billion; > = exceeded; $\mu g/m^3$= micrograms per cubic meter; ID = insufficient data; max = maximum

1 The national 1-hour ozone standard was revoked in June 2005. Statistics related to the revoked standard are shown in *italics*.
2 The national annual average PM10 standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics*.

Note: An exceedance of a standard is not necessarily related to a violation of the standard.

Source: Air Resources Board, https://www.arb.ca.gov/adam/topfour/topfour1.php

Table 3.3-3 provides the federal and state ambient air quality standards and identifies the properties and health effects of each of the criteria pollutants.

Table 3.3-3
State & National Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.	Formed when reactive organic gases (ROG) and nitrogen oxides (NO_X) react in the presence of sunlight. Major sources include on-road motor vehicles and any sources that burn fuels (e.g., gasoline, natural gas, wood, oil), solvent evaporation, petroleum processing and storage, pesticides and commercial/ industrial mobile equipment.
	8 hours	0.07 ppm	0.070 ppm		
Respirable Particulate Matter (PM10)	24 hours	50 µg/m^3	150 µg/m^3	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in $PM_{2.5}$ levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Dust and fume-producing industrial and agricultural operations, combustion of any fuel (including fireplaces), atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Average	20 µg/m^3	---		
Fine Particulate Matter (PM2.5)	24 hours	---	35 µg/m^3		Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_X, sulfur oxides, and organics.
	Annual Average	12 µg/m^3	12 µg/m^3		
Carbon Monoxide	1 hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.	Internal combustion engines, primarily gasoline-powered motor vehicles, and any source that burns fuel such as heavy construction equipment, farming equipment and residential heating.
	8 hours	9.0 ppm	9 ppm		

Table 3.3-3
State & National Criteria Air Pollutant Standards, Effects, and Sources

Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration - Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads. See also Carbon Monoxide.
	Annual Average	0.030 ppm	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Fuel combustion, coal or oil burning power plants and industries, oil refineries, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Average	---	0.03 ppm		
Lead	30 Day Average	1.5 $\mu g/m^3$	---	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Present source: lead smelters, battery manufacturing & recycling facilities; deterioration of lead paint. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 $\mu g/m^3$		
	Rolling 3-Month Average	---	0.15 $\mu g/m^3$		
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM2.5.

Table 3.3-3
State & National Criteria Air Pollutant Standards, Effects, and Sources

Sulfates	24 hour	25 µg/m^3	No National Standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.	Produced by the reaction in the air of SO_2.
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Geothermal Power Plants, Petroleum Production and refining
Vinyl Chloride	24 hour	0.01 ppm	No National Standard	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation and oral exposure has resulted in liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation, as vinyl chloride exposure has been shown to increase the risk of a rare form of liver cancer in humans.	Discharge of exhaust gases from factories that manufacture or process vinyl chloride, or evaporation from areas where chemical wastes are stored; outgas from new plastic parts.

Sources (accessed February 2018):

ARB: https://www.arb.ca.gov/research/health/fs/fs1/fs1.htm;
http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/ozone/ozone.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/co/co.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/so2-1/so2-1.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/pb-1/pb-1.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/h2s/h2s.htm.
https://www.arb.ca.gov/research/aaqs/caaqs/sulf-1/sulf-1.htm;
https://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm;
http://www.arb.ca.gov/research/aaqs/caaqs/vc/vc.htm;

EPA: https://www3.epa.gov/airnow/particle/pm-color.pdf;
http://www.epa.gov/airnow/ozone-c.pdf;
https://www.epa.gov/no2-pollution/fact-sheets-and-additional-information-regarding-2010-revision-primary-national;
https://www.epa.gov/sites/production/files/2016-06/documents/20120320factsheet_secondary_standards.pdf;
https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality;
http://www.epa.gov/ttnatw01/hlthef/vinylchl.html; and
https://www.epa.gov/sites/production/files/2016-09/documents/vinyl-chloride.pdf.

REGULATORY SETTING

Federal Agencies & Regulations

Federal Clean Air Act

"The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)… for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM10] and less than 2.5 microns in diameter [PM2.5]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called "non-attainment areas". The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can "bump up" the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register."[12]

State Agencies & Regulations

California Clean Air Act

"The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards.., which, for certain pollutants and averaging periods are more stringent than the comparable federal standards. Responsibility for meeting California's standards is

[12] Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-1 to 3.3-2.

addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that air districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, PM2.5, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM10 standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards."[13]

"The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts."[14]

California Air Resources Board

"The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area's air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local air districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating stationary emission

[13] Ibid. Pages 3.3-2 to 3.3-3.
[14] Op. Cit. Page 3.3-5.

sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA."[15]

On-Road Heavy-Duty Vehicles Program.[16] On-road heavy-duty vehicles are major contributors to poor air quality in California. In particular, emissions from these vehicles are highly disproportionate to the total population of these vehicles. The problem is complicated by the large number of heavy-duty vehicles registered in other states that travel on California's highways and roads, while bringing goods and commerce into and out of our state. The ARB works closely with the EPA, engine and vehicle manufacturers, and other interested parties to address this issue by establishing and enforcing emissions standards. Other programs that work in concert with this program include the Heavy-Duty Vehicle Inspection Program which requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering, and engine certification label compliance; the Periodic Smoke Inspection Program which requires diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions; and the Emission Control Label Inspection Program which requires each vehicle operating in California, including those in transit from Mexico, Canada, or any other state, to be equipped with engines that meet California and/or EPA or equivalent emission standards and be labeled as such.

Low-Emission Vehicle Program.[17] The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. The first LEV standards ran from 1994 through 2003. LEV II regulations, which ran from 2004 through 2010, represent continuing progress in emission reductions. However, as the State's passenger vehicle fleet continued to grow and more sport utility vehicles and pickup trucks are used as passenger cars, the more stringent LEV II standards were needed to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, ARB adopted the LEV III amendments to California's LEV regulations to provide reductions needed to achieve the latest ozone and $PM_{2.5}$ standards. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles**.**

In-Use Off-Road Diesel-Fueled Fleets.[18] On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter (DPM) and NOx emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. These vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements

[15] Op. Cit. 3.3-6 to 3.3-7.

[16] ARB. Accessed September 2021at: https://www.arb.ca.gov/msprog/onroadhd/onroadhd.htm and https://www.arb.ca.gov/enf/hdvip/hdvip.htm.

[17] ARB. Accessed September 2021at: http://www.arb.ca.gov/msprog/levprog/levprog.htm; https://www.arb.ca.gov/msprog/levprog/levii/levii.htm; https://www.arb.ca.gov/msprog/levprog/levii/factsht.pdf; and https://www.arb.ca.gov/regact/2012/leviiighg2012/leviiighg2012.htm.

[18] ARB. Accessed September 2021at: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm; http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf; and https://www.arb.ca.gov/regact/2010/offroadlsi10/offroadisor.pdf.

making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

In-Use On-Road Heavy-Duty Diesel Vehicles (Bus and Truck).[19] On December 12, 2008, the ARB adopted the Truck and Bus Regulation that requires diesel trucks and buses that operate in California to be upgraded to reduce emissions and applies to nearly all privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. In light of the economic recession amendments that restructured the Truck and Bus Regulation were adopted by the ARB on December 17, 2010 and again on April 25, 2014. Beginning January 1, 2012, heavier trucks must be retrofitted with PM filters and older trucks engines must be replaced with 2010 model year or newer beginning January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. To allow for flexibility of compliance with the regulations, the regulation provides a variety of options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.

California Air Toxics Program.[20] In the 1980's, serious industrial accidents, in conjunction with researchers warning that exposure to very small amounts of toxic chemicals could cause long-term health problems, heightened public concern over the dangers of air toxics. As a result, the public demanded protection and control over the release of air toxics. The Air Toxics Program was created to protect the public's health; identify, prevent and control toxic emissions; identify health risks to the public; reduce emissions from high risk sources; increase community awareness of air toxics; improve interagency cooperation; and continue to reduce air toxics emissions in the future.

Key features of the program include compliance with the Toxic Air Contaminant Identification and Control Act (AB 1807-1983), the Air Toxics "Hot Spots" Information and Assessment Act (AB2588-1987), and the 1992 amendment to the law (SB1731). The 1990 Amendments of the federal CAA set up a nationwide air toxics control program. In 1993, the ARB expanded the TAC list to almost 200 substances to include the hazardous air pollutants (HAPs) identified in the 1990 federal CAA Amendments.

The federal program focuses on larger industrial sources that are of the highest national priority, such as chemical manufacturers. California's program focuses on protecting the public from all significant sources, regardless of size. The ARB works with both federal and local agencies to implement federal requirements in California while maintaining current public health safeguards and avoiding regulatory duplication.

[19] ARB. Accessed September 2021at: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm; https://www.arb.ca.gov/regact/2008/truckbus08/tsd.pdf; and https://www.arb.ca.gov/regact/2014/truckbus14/tb14isor.pdf.
[20] ARB. Accessed September 2021at: http://www.arb.ca.gov/html/brochure/airtoxic.htm

Diesel Risk Reduction Plan.[21] In August 1998, the ARB identified DPM as TACs and was required to determine the need for further control of DPM emissions. On September 28, 2000, the ARB approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90% overall from year 2000 levels. The plan requires all new diesel-fueled vehicles and engines to use diesel particulate filters and very low-sulfur diesel fuel. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75% by 2010 and 85% by 2020.

ATCM for School Bus Idling.[22] On December 12, 2002, the ARB adopted the Airborne Toxic Control Measure (ATCM) to Limit School Bus Idling and Idling at Schools. The ATCM, which became effective July 16, 2003, limits school bus idling and idling at or near schools to only when necessary for safety or operational concerns and targets school buses, school pupil activity buses, youth buses, paratransit vehicles, transit buses, and heavy-duty commercial motor vehicles that operate at or near schools. In 2009, SB 124 (Oropeza), codified the ATCM limiting school bus idling and clarified authority of peace officers and Air District to enforce the program.

ATCM for Diesel-Fueled Commercial Motor Vehicle Idling.[23] On July 22, 2004, the ARB adopted the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling and subsequently amended it on October 20, 2005, October 19, 2009, and December 12, 2013. The ATCM requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and sleeper berth equipped trucks, not idle the vehicle's primary diesel engine longer than five minutes at any location. Vehicles with 2008 and newer model year diesel engines must either be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling or meet a stringent NOx idling emission standard. Emissions producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements and requirements specified in the Low Emission Vehicle regulations. However, the regulation also contains exemptions allowing engine operation for power take-off, maintenance, extreme weather or emergency conditions, emergency vehicles, military and tactical vehicles, armored vehicles, workover rigs, etc.

ATCM for Asbestos.[24] Asbestos is found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in

[21] ARB. Accessed September 2021at: https://www.arb.ca.gov/diesel/background.htm; https://www.arb.ca.gov/diesel/documents/rmg.htm; and http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf.

[22] ARB. Accessed September 2021at: https://www.arb.ca.gov/toxics/sbidling/sbidling.htm.

[23] ARB. Accessed September 2021at: https://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm; and https://www.arb.ca.gov/regact/idling/idling.htm.

[24] ARB. Accessed September 2021at: http://arb.ca.gov/toxics/Asbestos/general.htm; http://www.arb.ca.gov/toxics/asbestos/asbestos.htm; http://www.arb.ca.gov/toxics/atcm/asbeatcm.htm; http://www.arb.ca.gov/toxics/asbestos/atcm/AsbP1IGD.pdf; http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm; CGS, accessed September 2021at: http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/Index.aspx;

the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. Another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

In July 1990, the ARB adopted an ATCM for surfacing application. The ATCM was amended in July 2000 and the amendments became effective in November 2011. The regulation prohibits the sale or use of restricted materials for unpaved surfacing unless is has been tested and found to have an asbestos content less than 0.25%. Restricted material includes aggregate material extracted from an ultramafic (or ultrabasic) rock unit as shown on the geologic maps referenced in the amended ATCM; ultramafic rock including serpentine; or aggregate material shown to have an asbestos content of 0.25% or more; or any mixture containing 10% of these materials. The regulation also establishes specific testing and notification of the restricted materials.

In July 2001, the ARB approved an ATCM for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos, which requires the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the Air District prior to the start of a project.

The ATCM applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the California Department of Conservation, California Geological Survey (CGS) as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the United States Geological Survey (USGS) and CGS maps shows no ultramafic rock has been found near the community Cutler-Orosi.

Local Policy & Regulations

San Joaquin Valley Unified Air Pollution Control District (Air District)

http://www.conservation.ca.gov/cgs/geologic_hazards/hazardous_minerals/Pages/Index.aspx; and USGS, accessed September 2021at: http://pubs.usgs.gov/of/2011/1188/.

The Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality-management strategies. The Air District's 11 core values include: protection of public health; active and effective air pollution control efforts while seeking to improve the Valley's economic prosperity and grow opportunities for all Valley residents; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the San Joaquin Valley; continuous improvement; effective and efficient use of public funds; respect for the opinions and interests of all Valley residents; and robust public outreach and education on Valley air quality progress and continuing air quality efforts. [25] To achieve these core values the Air District has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the proposed Project are listed and described further below.

Ozone Attainment Plans

"The SJVAB has severe ozone problems. The EPA has required the SJVAPCD to demonstrate in a plan, substantiated with modeling, that the ozone NAAQS could be met by the November 15, 2005, deadline. However, the district could not provide this demonstration for several reasons, including that its achievement would require regulation of certain source categories not currently under the jurisdiction of the district. According to the district, in order to meet the standard the SJVAB must reduce the total emissions inventory by an additional 30 percent (300 tons per day). Because attainment by the deadline could not be demonstrated by the mandated deadlines, the federal sanction clock was started. The clock was to be stopped if the SJVAPCD SIP could demonstrate compliance with specified federal requirements by November 15, 2005. However, the district recognized that it could not achieve demonstration in time. Therefore, the district, through petition by the State on behalf of SJVAPCD, sought a change in the federal nonattainment classification from "severe" to "extreme" nonattainment with the ozone standard. An extreme nonattainment designation would effectively move the compliance deadline to year 2010 before federal sanctions would begin.

On February 23, 2004, EPA publicly announced its intention to grant the request by the State of California to voluntarily reclassify the SJVAB from a "severe" to an "extreme" 1-hour ozone nonattainment area. The EPA stated that, except for a demonstration of attainment of the ozone standard by 2005, the SJVAPCD has submitted all of the required severe area plan requirements and they were deemed complete. The CARB submitted the 2004 Extreme Ozone Attainment Demonstration Plan to EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone, and on October 16, 2008, EPA proposed to approve the Air District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone."[26]

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration

[25] SJVAPCD. Core Values. Accessed September 2021at: http://www.valleyair.org/General_info/aboutdist.htm#Core%20Values.
[26] Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-1 to 3.3-2.

Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a $29-million Clean Air Act penalty. The penalty is being collected through an additional $12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The Air District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

Following litigation over approval of the 2004 Extreme Ozone Attainment Demonstration Plan, EPA withdrew its approval in November 2012, and the Air District and ARB withdrew the plan from consideration. The Air District adopted the 2013 Plan for the Revoked 1-Hour Ozone Standard on September 19, 2013. This plan demonstrated that the SJVAB will attain the revoked 1-hour ozone standard by 2017. On May 6, 2014, the Air District submitted a formal request that the EPA determine that the Valley has attained the federal 1-hour ozone standard and to eliminate the $29 million Clean Air Act penalty. Per federal requirements, the Air District's submittal includes a clean data finding (2011-2013) and a finding that attainment is due to permanent and enforceable emissions reductions.

As part of the clean data finding, the Air District requested EPA concurrence that an exceedance at Fresno-Drummond on August 10, 2012 was due to an exceptional event. Alternatively, the Air District also provided compelling evidence that the Valley would attain the 1-hour ozone standard but for the influence of international air pollutant transport, allowing nonattainment penalties to be lifted under CAA 179B. On July 18, 2016, EPA determined that, effective August 17, 2016, the SJVAB has attained the revoked 1-hour standard.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NOx and a 25-percent reduction of ROG. The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The Air District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.

The EPA revised the federal 8-hour ozone standard in 2008. To address this standard on June 16, 2016, the Air District adopted the 2016 Ozone Plan for 2008 8-hour Ozone Standard, which the SJVAB must attain by 2031. This plan demonstrates that the Air District's attainment strategy

satisfies all federal CAA requirements and includes a "black box" provision to satisfy the contingency requirements under the federal CAA. The "black box" represents reductions that would be needed to attain the standard for which specific measures or technologies are not currently available. The strategy in this plan will reduce NOx emissions by over 60% between 2012 and 2031.

In October 2015, the EPA again revised and lowered the federal 8-hour ozone standard. Upon EPA's publication of the implementation rule, the Air District will be required to prepare a new plan to address the 2015 standard.

Particulate Matter Attainment Plans

The SJVAB was designated nonattainment of state and federal health-based air quality standards for PM_{10}. However, as discussed below, the SJVAB has demonstrated attainment of the federal PM_{10} standards and currently remains in nonattainment only for the state standards. The SJVAB is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet CAA requirements for the PM_{10} standard, the Air District adopted a PM10 Attainment Demonstration Plan (Amended 2003 PM10 Plan and 2006 PM10 Plan), which had an attainment date of 2010. The Air District adopted the 2007 PM10 Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the San Joaquin Valley as an attainment/maintenance area for PM_{10} on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

On April 30, 2008, the Air District adopted the 2008 PM2.5 Plan satisfying federal implementation requirements for the 1997 federal $PM_{2.5}$ standard. However, on the verge of the demonstration of attainment with the standard the SJVAB was plagued with extreme drought, stagnation, strong inversions, and historically dry conditions and could not achieve attainment by the 2015 deadlines. The 2015 Plan for the 1997 PM2.5 Standard (2015 PM2.5 Plan) was adopted by the Air District on April 16, 2015, and is a continuation of the Air District's strategy to improve the air quality in the SJVAB. The 2015 PM2.5 Plan contains most stringent measures, best available control measures, additional enforceable commitments for further reductions in emissions, and ensures attainment of the 1997 federal 24-hour standard by 2018 and the annual standard by 2020.

In December 2012, the Air District adopted the 2012 PM2.5 Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour $PM_{2.5}$ standard. The ARB approved the Air District's 2012 PM2.5 Plan for the 2006 standard at a public hearing on January 24, 2013. This plan seeks to bring the San Joaquin Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

EPA lowered the annual $PM_{2.5}$ standard in 2012 and in response the Air District adopted the 2016 Moderate Area Plan for the PM2.5 Standard. This plan demonstrates that the SJVAB attainment of the revised annual standard by 2021 is not practical and seeks to bring the SJVAB into

attainment by 2025. The plan also includes a request for reclassification of the SJVAB from "moderate nonattainment" to "serious nonattainment".

The Air District is currently in the process of developing an attainment strategy to address multiple $PM_{2.5}$ standards (including the 1997 24-hour standard of 65 $\mu g/m^3$ and annual standard of 15 $\mu g/m^3$; the 2006 24-hour standard of 35 $\mu g/m^3$; and the 2012 annual standard of 12 $\mu g/m^3$) as well as a plan to demonstrate maintenance of the 1987 PM10 standard as required under the federal Clean Air Act. The proposed attainment strategy will include the preparation of the 2017 PM2.5 Plan; 2017 PM10 Maintenance Plan; and 5 Percent Plan for the 1997 PM2.5 Standard. The Air District continues to work with EPA on issues surrounding these plans, including EPA implementation updates.

Criteria Pollutants

Although all criteria pollutants are to be evaluated, the primary pollutants of concern during project construction and operation are ROG, NO_x, PM_{10}, and $PM_{2.5}$. Ozone is a secondary pollutant that is formed in the atmosphere sometimes miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. As demonstrated in **Table 3.3-2**, the SJVAB often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The SJVAB also exceeds air quality standards for PM_{10}, and $PM_{2.5}$; therefore, substantial project emissions may contribute to an exceedance for these pollutants.

To assess air quality impacts, the Air District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact.[27] The Air District's thresholds of significance for criteria pollutants, which are based on Air District Rule 2201 New Source Review offset thresholds, are provided below in **Table 3.3-4**.

As shown in **Table 3.3-4**, the Air District has three sets of significance thresholds for each pollutant based on the source of the emissions. According to the GAMAQI, "The District identifies thresholds that separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations."[28]

[27] SJVAPCD, GAMAQI, page 74.
[28] Ibid. 75.

Table 3.3-4
Criteria Pollutant Emission Significance Thresholds

Pollutant / Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Source: Air District. GAMAQI. Table 2. Page 80.

Operational emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, "District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District's significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases."[29]

Toxic Air Contaminants

"The operation of any project with the potential to expose sensitive receptors to substantial levels of toxic air contaminants (TAC's) would be deemed to have a potentially significant impact. More specifically, proposed development projects that have the potential to expose the public to TAC's in excess of the following thresholds would be considered to have a significant air quality impact:

[29] Op. Cit. 76.

- Probability of contracting cancer for the Maximally Exposed Individual[30] exceeds 20 in one million.
- Ground-level concentrations of non-carcinogenic TAC's would result in a Hazard Index greater than 1 for the Maximally Exposed Individual.

Application of these standards would typically apply to the preparation of more detailed project-specific health risk assessments (based on a detailed air dispersion modeling effort) that would occur as individual projects are considered under the proposed project. For this programmatic assessment of the proposed project, the assessment of TAC's is conducted at a qualitative level with specific policies and implementation measures provided to address the potential impacts associated with this issue."[31]

Tulare County Board of Supervisors

"The County continues to evaluate and consider a variety of Federal, State, and SJVAPCD programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively."[32]

"Resolution 2002-0157. Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

- Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
- Purchase of three new buses and installation of additional bicycle racks on buses;
- Public outreach to encourage the use of alternative modes of transportation;
- Providing preferential parking for carpools and vanpools;
- Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
- Supporting the purchase of hybrid vehicles for the County fleet;
- Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and
- Programming $13,264,000 of highway widening projects."[33]

"Resolution 2004-0067. As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors

[30] Maximally Exposed Individual represents the worst-case risk estimate based on a theoretical person continuously exposed for 70 years at the point of highest compound concentration in air.

[31] Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-15 to 3.3-16.

[32] Ibid. 3.3-13.

[33] Op. Cit.

adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and
- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies."[34]

The County continues to evaluate and consider Federal, State, and Air District programs in order to respond to the non-attainment designation for state PM10 standards that the SJVAB has received. "On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 NAAQS and approved the PM10 Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM10 standard, all requirements included in the SJVAPCD PM10 Plan are still in effect. The resolution contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM10 emissions in the County:

- Paving or stabilizing of unpaved roads and alleys;
- Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
- Curbing, paving, or stabilizing shoulders on paved roads;
- Frequent routine sweeping or cleaning of paved roads;
- Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
- Debris removal after wind and rain runoff when blocking roadways."[35]

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare.[36] The following General Plan policies apply to the proposed Project:

AQ-1.1 Cooperation with Other Agencies - The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards. The County shall partner with the SJVAPCD,

[34] Op. Cit.
[35] Op. Cit. 3.3-14
[36] Tulare County General Plan 2030 Update. Part 1 – Goals and Policies Report.

Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

AQ-1.2 Cooperation with Local Jurisdictions - The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts - The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility - The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-2.1 Transportation Demand Management Programs - The County shall coordinate and provide support for County Transportation Demand Management programs with other public and private agencies, including programs developed by the TCAG and the SJVAPCD.

AQ-2.2 Indirect Source Review - The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:

1. Providing bicycle access and parking facilities,
2. Increasing density,
3. Encouraging mixed use developments,
4. Providing walkable and pedestrian-oriented neighborhoods,
5. Providing increased access to public transportation,
6. Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and
7. Establishing telecommuting programs or satellite work centers.

AQ-2.3 Transportation and Air Quality - When developing the regional transportation system, the County shall work with TCAG to comprehensively study methods of transportation which may

contribute to a reduction in air pollution in Tulare County. Some possible alternatives that should be studied are:

1. Commuter trains (Light Rail, Amtrak, or High Speed Rail) connecting with Sacramento, Los Angeles, and San Francisco, with attractive services scheduled up and down the Valley,
2. Public transportation such as buses and light rail, to serve between communities of the Valley, publicly subsidized if feasible,
3. Intermodal public transit such as buses provided with bicycle racks, bicycle parking at bus stations, bus service to train stations and airports, and park and ride facilities, and
4. Community transportation systems supportive of alternative transportation modes, such as cycling or walking trails, with particular attention to high-density areas.

AQ-2.4 Transportation Management Associations - The County shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations (TMAs) that may assist in the reduction of pollutants through strategies that support carpooling or other alternative transportation modes.

AQ-2.5 Ridesharing - The County shall continue to encourage ridesharing programs such as employer-based rideshare programs.

AQ-3.1 Location of Support Services - The County shall encourage the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) near major employment centers for the purpose of reducing midday vehicle trips.

AQ-3.2 Infill near Employment - The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.

AQ-3.3 Street Design - The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.

AQ-3.4 Landscape - The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO_2, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses - The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.

AQ-4.1 Air Pollution Control Technology - The County shall utilize the BACM and RACM as adopted by the County to support SJVAPCD air quality attainment plans to achieve and maintain healthful air quality and high visibility standards. These measures shall be applied to new development approvals and permit modifications as appropriate.

AQ-4.2 Dust Suppression Measures - The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

1. Site watering or application of dust suppressants,
2. Phasing or extension of grading operations,
3. Covering of stockpiles,
4. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
5. Re-vegetation of graded areas.

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions - The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.

AQ-4.4 Wood Burning Devices - The County shall require the use of natural gas where service is available or the installation of low-emission, EPA-certified fireplace inserts in all open hearth fireplaces in new homes as required under the SJVAPCD Rule 4901 – Wood Burning Fireplaces and Wood Burning Heaters. The County shall promote the use of natural gas over wood products in space heating devices and fireplaces in all existing and new homes.

AQ-4.5 Public Awareness - The County shall promote public awareness of the seriousness and extent of the existing air quality problems.

AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection - Asbestos is of concern to Tulare County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including: 1) creating walkable

neighborhoods; 2) providing a mix of residential densities; 3) creating a strong sense of place; 4)mixing land uses; 5) directing growth toward existing communities; 6) building compactly; 7) discouraging sprawl; 8) encouraging infill; 9) preserving open space; 10) creating a range of housing opportunities and choices; 11) utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control; and 12) encouraging connectivity between new and existing development.

LU-1.2 Innovative Development - The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

LU-1.3 Prevent Incompatible Uses - The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.

LU-1.4 Compact Development - The County shall actively support the development of compact mixed use projects that reduce travel distances.

LU-1.8 Encourage Infill Development - The County shall encourage and provide incentives for infill development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-3.2 Cluster Development - The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately-maintained road designed to meet County road standards.

LU-3.3 High-Density Residential Locations - The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

TC-5.1 Bicycle/Pedestrian Trail System - The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.

TC-5.2 Consider Non-Motorized Modes in Planning and Development - The County shall consider incorporating facilities for non-motorized users, such as bike routes, sidewalks, and trails when constructing or improving transportation facilities and when reviewing new development proposals. For developments with 50 or more dwelling units or non-residential projects with an equivalent travel demand, the feasibility of such facilities shall be evaluated.

Impact Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Project Impact Analysis: ***Less Than Significant Impact***

The Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Cutler-Orosi Community Plan Update was released for comment between April 9 through May 9, 2021. At that time no specific development projects had been identified within the Community Plan Update Planning Area. An Air Quality and Greenhouse Gas Assessment Technical Memorandum (AQ/GHG Memorandum, included in Appendix "A" of this Draft EIR) for the Community Plan Update was prepared in September 2021. Estimates of future development were based on the County's 1.3% annual growth rate consistent with the General Plan. The future development mix was assumed to be similar to what was already present in the communities of Cutler-Orosi.

The land use growth assumptions and the associated emissions evaluated in the AQ/GHG Memorandum are consistent with the proposed Community Plan Update. As previously noted, there are no development projects proposed with the Community Plan Update; however, to ensure potential impacts from future buildout within the scope of the Community Plan Update are adequately evaluated it was determined that emissions analysis was needed for anticipated future land use developments.

The Complete Streets and Road Maintenance Programs are components of the Community Plan Update. As such, it was determined that analysis was required to evaluate potential impacts resulting from implementation of the Complete Streets and Road Maintenance Programs. To ensure that implementation of the Complete Streets and Road Maintenance Programs are adequately evaluated and addressed in the DEIR, the emissions associated with these programs have been quantified and evaluated in the AQ/GHG Memorandum.

Contribution to Air Quality Violations

The CEQA Guidelines indicate that a significant impact would occur if the proposed project would conflict with or obstruct implementation of the applicable Air Quality Plan (AQP). AQPs are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the SJVAB can reach attainment for the ambient air quality standards. In order to show attainment of the standards, the Air District analyzes the growth projections in the San Joaquin Valley, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The Air District then formulates a control strategy to reach attainment.

The Air District's GAMAQI provides the following guidance on analyzing conformity with the applicable AQPs, "As presented in Chapter 8 [of the GAMAQI], the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District's air quality plans. Thus, projects with emission below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan.""[37]

Construction-related and operations-related emissions associated with the projected buildout of the Cutler-Orosi Community Plan Update Planning Area, including the Complete Streets and Road Maintenance Programs as well as anticipated future development projects, are identified in **Table 3.3-5** and **Table 3.3-6**, respectively.

Table 3.3-5. Total Annual Average Construction-Related Emissions (Development Projects Plus Road Improvements)

	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$	CO_2e
Projected Future Developments							
Total Construction							
Averaged over 13-year CPU life							
Road Improvements							
Total Emissions							
Averaged over 10-year remaining CPU life							
Total Average Annual Construction Emissions							
Significance Thresholds	10	10	100	27	15	15	---
Exceed Threshold – Significant?	No	No	No	No	No	No	---

Source: See Air Quality and Greenhouse Gas Analyses Technical Memorandum prepared September 2021.

As demonstrated in **Table 3.3-5**, the average annual construction-related emission resulting from implementation of the Community Plan Update, including the Complete Streets and Road Maintenance Programs and projected future developments, do not exceed the Air District's thresholds of significance. Therefore, construction-related emissions resulting from the implementation of the Community Plan Update will not cause a significant contribution to air quality violations.

[37] Air District. GAMAGI. Page 65.

Table 3.3-6. Total Annual Operations-Related Emissions at 2030 Buildout (Development Projects Only)							
	ROG	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Total Annual Emissions							
Significance Thresholds	10	10	100	27	15	15	---
Exceed Threshold – Significant?	No	No	No	No	No	No	---
Source: See Air Quality and Greenhouse Gas Analyses Technical Memorandum prepared September 2021.							

As the Complete Streets and Road Maintenance Programs are road improvement projects, their implementation includes construction-related emissions only and will not add to the operations-related emissions provided in the AQ/GHG Memorandum. **Table 3.3-6** presents the operations-related emissions resulting from projected future development through Year 2030, as provided in the AQ/GHG Memo. As demonstrated in **Table 3.3-6**, implementation of the Community Plan Update, will not exceed the Air District's thresholds of significance for operations. Therefore, implementation of the Community Plan Update will not cause a significant contribution to air quality violations. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Consistency with Assumptions in AQPs

The primary way of determining consistency with the AQP's assumptions is determining consistency with the applicable General Plan to ensure that a project's population density and land uses are consistent with the growth assumptions used in the AQPs for the SJVAB. Projects requiring a General Plan Amendment might not be accounted for in the AQP growth forecast; however, the addition of vacant or agricultural land to the existing UDB land area, and thus to the AQP's emission inventory, may not result in an increase in the actual amount of land developed by the AQP's attainment year.

The annual growth forecasts for Tulare County included in the applicable AQPs are:[38]

- 2004 Extreme Ozone Attainment Demonstration Plan – 1.87%
- 2007 Ozone Plan – 1.94%
- 2013 Plan for the Revoked 1-Hour Ozone Standard – 1.92%
- 2016 Plan for the 2008 8-Hour Ozone Standard – 1.44%
- 2008 PM2.5 Plan – 3.3%
- 2015 Plan for the 1997 PM2.5 Standard – 1.92%
- 2016 Moderate Area Plan for the 2012 PM2.5 Standard – 1.44%
- 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards – 1.02%

The proposed UDB expansion would add approximately ±712 acres to the existing Cutler-Orosi UDB. The expansion to the UDB has been proposed to provide location flexibility for

[38] Applicable Air Quality Plans can be found on the Air District website at: http://valleyair.org/Air_Quality_Plans/air-quality-plans.htm.

developers to respond to local market demands to accommodate projected future growth through the Year 2030 Planning horizon. The addition of the ±712-acre land area to the UDB would not result in an increase in the total amount (i.e., acreage) of land actually developed by the AQP's attainment year. The additional land area is necessary to place the UDB boundary lines along logical alignments, such as property lines and roadways. The UDB expansion is an administrative reallocation of land intended to provide opportunities to stimulate economic development to meet the needs of the existing and future community and nearby residents. As no specific development projects are currently proposed and an unknown number of proposals may occur within the UDB during the lifetime of the Community Plan Update, the proposed Community Plan is intended only to direct the density, intensity, and types of growth within the community. Projected growth is consistent with the County's General Plan at an annual growth rate of 1.3% per year. The County's growth rate is lower than the growth rates applied in the applicable AQPs; therefore, the emissions resulting from the buildout of the Community Plan, including the UDB expansion area, has been included in the AQPs forecasts. As such, the project would not conflict with the assumptions made in the AQPs. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Control Measures

The Air District's AQPs contain a number of control measures which are enforceable requirements through the adoption of Air District rules and regulations. Future development projects, as well as construction activities associated with the Complete Streets and Road Maintenance Programs, will be required to comply with all applicable Air District rules and regulations, including Regulation VIII (PM10 Prohibitions) and Rule 9510 (Indirect Source Review). Furthermore, the Tulare County General Plan includes Policies AQ-1.1, AQ-1.2, AQ-2.1 through AQ-2.3, and AQ-4.1 through AQ-4.6, which were specifically designed to ensure cooperation with the Air District and TCAG in effective planning of the County's future growth and development, and to ensure compliance with Air District rules and regulations included in the AQPs. These policies would be implemented for future development projects within the Community Plan Update Planning Area. Therefore, buildout of the Community Plan would not conflict with or obstruct implementation of the applicable AQPs.

Other than the Complete Streets and Road Maintenance Programs, there are no specific development projects (such as residential, commercial, or industrial uses) associated with the Cutler-Orosi Community Plan Update. The Community Plan Update establishes the planning guidelines for the anticipated growth of the community through the horizon Year 2030. As previously discussed, the Community Plan Update growth projections and emissions inventory are consistent with the applicable AQPs. Future developments will comply with all applicable General Plan policies, Cutler-Orosi Community Plan policies, and Air District rules and regulations. Therefore, buildout of the Community Plan Update would not conflict with or obstruct implementation of the applicable AQPs. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is San Joaquin Air Basin. Annual construction-related emissions do not exceed the Air District's annual significance thresholds for construction, nor do the annual operation-related emissions exceed the Air District's annual significance thresholds for operations. Buildout of the Community Plan Update at an annual growth rate of 1.3% is lower than, and therefore consistent with, the growth forecasts included in the applicable Air District AQPs. Future developments will be required to implement all applicable Tulare County General Plan policies, Cutler-Orosi Community Plan policies, and all applicable Air District rules and regulations. Therefore, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the community. Projected growth of the community is below, and therefore consistent with, the assumptions and emissions inventories of the applicable AQPs. Future developments will be evaluated on a project-by-project basis. Consultation with the Air District, and implementation of County policies and compliance with Air District rules and regulations would reduce potential impacts of future development. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Project Impact Analysis: ***Less Than Significant Impact t***

As discussed in the AQ/GHG Memorandum, implementation of the Community Plan Update would have a cumulatively significant impact if: (1) emissions of nonattainment pollutants exceed the Air District's project-level significance thresholds; (2) the Community Plan is not consistent with the applicable AQPs; or (3) implementation of the Community Plan would result in significant cumulative health effects.

Emissions Analysis

The SJVAB is in nonattainment for federal and state ozone standards, nonattainment for federal and state $PM_{2.5}$ standards, and nonattainment for state PM_{10} standards. The Air District's significance thresholds for ROG and NOx (ozone precursors) and for PM_{10} and $PM_{2.5}$ are presented in **Table 3.3-4**. Operations-related emissions that exceed these significance thresholds would be considered significant at the project level, as well as cumulatively significant. Operations-related emissions anticipated by the buildout of the Community Plan are presented in **Table 3.3-6**. As discussed in Checklist Item a), operations-related emissions at full buildout would not exceed the Air District's annual thresholds of significance. As such,

the implementation and buildout of the Community Plan would be considered to have ***Less Than Significant Cumulative Impacts*** related to this Checklist Item.

Consistency with AQPs

As discussed in the AQ/GHG Memorandum and Checklist Item a) above, the Community Plan Update growth projections and emissions inventory are consistent with the assumptions and emissions inventories in the applicable AQPs. Future developments will comply with all applicable General Plan policies, Cutler-Orosi Community Plan policies, and all applicable Air District rules and regulations. Therefore, buildout of the Community Plan Update Planning Area would not conflict with or obstruct implementation of the applicable AQPs. As such, the Community Plan Update would have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Health Impacts

As discussed in the AQA Report, significance thresholds for ROG and NO_x are not designed to be indicators of health effects from ROG and NO_x individually. However, it is possible that someone could infer that a project could result in a cumulative contribution to the existing health impacts of ozone and/or secondary particulate matter if the thresholds are exceeded. The impacts are not considered a project-specific impact because project emissions of ROG and NO_x emissions from a single project would not result in a measurable change in ozone or particulate concentrations; however, the combined effects of many projects dispersed throughout the region could potentially increase concentrations or slow progress toward achieving the air quality standards. The combination of project-related emissions with pollutants from other sources within the SJVAB could cumulatively contribute to a significant impact.

As presented in **Table 3.3-6,** operations-related criteria pollutant emissions at projected buildout would not exceed the Air District's significance thresholds and would therefore, not exceed AAQS that would result in significant health risks. Furthermore, as previously discussed in Checklist Item a), the County will implement all applicable General Plan and Cutler-Orosi Community Plan policies and will consult with the Air District on a project-by-project basis to identify and mitigate, if necessary, any potential impacts on air quality. Therefore, the Community Plan Update would not significantly contribute to violation of any AAQS or increased health risks. The Community Plan Update would have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As previously noted, criteria pollutant emissions resulting from implementation of the Community Plan fall below the Air District's annual significance thresholds for both construction-related and operations-related emissions. Future developments will be required

to implement all applicable Tulare County General Plan and Cutler-Orosi Community Plan policies and to comply with all Air District rules and regulations. Therefore, the Community Plan Update would have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

c) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less Than Significant Impact***

As discussed in the AQ/GHG Memorandum, there is potential for exposure to pollutants resulting from the implementation of the Community Plan Update. Potential health risks can arise from exposure to a variety of sources including fugitive dust emissions during construction-related activities and emissions of hazardous air pollutant (HAPs)/toxic air contaminants (TACs) during both construction-related and operations-related activities.

HAP/TAC Emissions

As discussed in the AQ/GHG Memorandum, potential health risks from HAPs/TACs could occur during construction-related and operations-related activities. Construction-related activities are short-term and would cease upon completion of a project. Operations-related activities occur throughout the life of a project. Other than the four previously approved development projects, which included project-specific review, and the Complete Streets and Road Maintenance Programs, there are no other specific development projects proposed within the Community Plan Update Planning Area that would trigger a health risk analysis at this time. As specific land use developments, their locations, and timing is not known, localized impacts from HAP/TAC emissions cannot be determined at this time and to do so would be speculative. The Tulare County General Plan includes Policies AQ-1.1 through AQ-1.4, AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8, which were specifically designed to address potential impacts from siting incompatible uses in close proximity to each other. In order to ensure that development within the Community Plan Update Planning Area does not expose sensitive receptors to significant impacts from HAP/TAC emissions, Tulare County will review individual projects on a project-by project basis. Development projects would implement all applicable General Plan and Cutler-Orosi Community Plan policies that would reduce potential risks from inappropriate siting of incompatible uses. The County would also use the Air Resources Board (ARB) guidance document *Air Quality Land Use Handbook* to determine if ARB-recommended screening criteria are exceeded and will follow applicable recommendations in the California Air Pollution Control Officers Association (CAPCOA) guidance document *Health Risk Assessments for Proposed Land Use Projects*. The County will also consult with the Air District on a project-by-project basis during the CEQA process to determine whether additional health risk screening or modeling would be required to identify, and mitigate, if necessary, potentially significant health risk impacts. The Air District would perform a Risk Management Review (RMR) for stationary source projects subject to the Air District's permitting process; permits would be issued only if it can be demonstrated that the facility would not have a significant health risk. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Valley Fever

The SJVAB is considered an endemic area for valley fever *Coccidioides immitis (C. immitis*). Distribution of valley fever is not uniform within endemic areas and are dependent upon physical, chemical, and biological conditions of the soils. In areas with soils that contain *C. immitis* spores, exposure to valley fever occurs when earthmoving construction-related activities, such as grading and trenching, cause windblown dust. As discussed in the AQA Report, the Cutler-Orosi Community Plan Update Planning Area is in an area with a long history of cultivation where fertilizers have been applied, and soil moisture has been maintained through irrigation. These factors would lead to a low probability of having *C. immitis* growth sites and exposure from disturbed soil. However, construction-related activities associated with the development of the Community Plan Update Planning Area would generate fugitive dust that could contain *C. immitis* spores. The Tulare County General Plan includes Policies AQ-4.2 and AQ-1.3, which were specifically designed to address impacts from the generation of dust emitted into the air, and will be implemented for future development projects. Future development projects are subject to Air District Regulation VIII (PM10 Prohibition) requirements. Road improvements and construction of future development projects would incorporate design features and/or mitigation measures (such as compliance with the Air District's Regulation VIII, Dust Control Plans, or other control techniques) that minimize the generation of fugitive dust during construction-related activities. Therefore, implementation of General Plan and Cutler-Orosi Community Plan policies and compliance with applicable Air District rules and regulations would reduce the chance of exposure to valley fever during construction-related activities. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Asbestos

In areas containing naturally occurring asbestos, earthmoving construction-related activities, such as grading and trenching, could expose receptors to windblown asbestos. Demolition and remodeling activities could expose receptors through accidental release of asbestos-containing building materials. As discussed in the AQA Report, according to the United States Geological Soil Survey map of areas where naturally occurring asbestos in California are likely to occur, there are no such areas within the Cutler-Orosi Community Plan Update Planning Area. Therefore, construction-related activities during development of the Community Plan Update is not anticipated to expose receptors to naturally occurring asbestos.

Future development and road improvement projects would not be constructed with materials containing asbestos and as such, would pose no threat of exposure. However, some of the older housing units and non-residential facilities within the community could have asbestos containing materials and could expose residents if these buildings were to be remodeled or demolished. Remodeling and demolition projects are subject to Air District Rule 4002 (National Emission Standards for Hazardous Air Pollutants, or NESHAPs) and require notification to the Air District if the disturbed areas exceed certain parameters and require special handling and disposal of asbestos-containing materials. Compliance with California

and County building codes and compliance with Air District regulation would reduce risks of exposure to asbestos. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is SJVAB. The Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the community. Future developments will be evaluated on a project-by-project basis and will not expose the public to substantial pollutant concentrations. The Tulare County General Plan includes Policies AQ-1.1 through AQ-1.4, AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8, which were specifically designed to address potential impacts from siting incompatible uses in close proximity to each other. These policies would be implemented for future development projects. The County will consult with the Air District on a project-by-project to determine whether screening or modeling would be required to identify potential health risks. Compliance with applicable District rules and regulations would reduce potential impacts from exposure to pollutants. As such, the development of the Community Plan Update Planning Area would not expose the public to substantial pollutant concentrations. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the community. Implementation of General Plan and Community Plan policies and compliance with applicable Air District rules and regulations designed to address potential impacts associated with the inappropriate siting of incompatible uses would reduce potential impacts. To ensure that sensitive receptors would not be exposed to substantial pollutant concentrations Tulare County will consult with the Air District on a project-by-project basis to identify and mitigate, if necessary, potential health risks. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Project - Impact Analysis: ***Less Than Significant Impact***

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. According to the Air District's GAMAQI, analysis of potential odor impacts should be conducted for either of the following two situations:

- **Generators:** projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- **Receivers:** residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

For a project locating near an existing source of odors, the project should be identified as having a potentially significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one *confirmed* complaint per year averaged over a three-year period, or
- Three *unconfirmed* complaints per year averaged over a three-year period.

Potential odor sources from construction-related activities associated with future development projects and the Complete Streets and Road Maintenance Programs could originate from diesel exhaust from construction equipment and fumes from architectural coating and paving operations. However, these odors, if perceptible, would dissipate rapidly as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during construction would not affect a substantial number of people in the area.

Potential odor sources associated with future development projects could originate from diesel exhaust from delivery vehicles (e.g., heavy-duty trucks) and manufacturing processes once a projects becomes operational. However, these odors, if perceptible, would dissipate rapidly as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during operations would not affect a substantial number of people in the area.

Other than the Complete Streets and Road Maintenance Programs, there are no other specific development projects proposed within the Community Plan Update Planning Area that would trigger an odor assessment at this time. The Tulare County General Plan includes Policies AQ-1.1 through AQ-1.4, AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8, which were specifically designed to address potential impacts from siting incompatible uses in close proximity to each other. These policies would be implemented for future development projects. As these policies encourage infill developments and project design to reduce air impacts, future developments would be encouraged to be sited in areas distanced sufficiently to reduce potential impacts from existing sources. Furthermore, all projects (with the exception of agricultural operations) are subject to Air District Rule 4102 (Nuisance). To ensure potential impacts are addressed, if future developments were to result in sensitive receptors being located within the Air District's recommended screening distances as identified in Table 6 of

the GAMAQI, a more detailed analysis, would be recommended.[39] The detailed odor analysis would involve contacting the Air District's Compliance Division for information regarding odor complaints and evaluation of potential impacts taking into consideration the Air District's complaint record and the source(s) of the odors.

Implementation of the applicable General Plan and Community Plan policies and compliance with applicable District rules and regulations specifically designed to address air quality and odor impacts, would reduce potential odor impacts. Future development projects would be evaluated on a project-by-project basis. If a future development project may be a source of odors it will, if technically possible, mitigate any potential nuisance impacts. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is the SJVAB. The Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the Cutler-Orosi UDB. Future developments will be evaluated on a project-by-project basis to identify potential odor sources in close proximity to the proposed development. New development projects are not anticipated to create new permanent sources of odor, nor are they anticipated to expose substantial numbers of people to existing sources of potential nuisance odors. Therefore, ***Less Than Significant Cumulate Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Implementation of County policies and Air District regulation designed to address potential land use conflicts and nuisance odor issues associated with the inappropriate siting of incompatible uses would reduce potential odor impacts. Future development projects would be evaluated on a project-by-project basis and would mitigate, if necessary and technically possible, any nuisance impacts. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

[39] Table 6 of the GAMAQI is located on page 103 or can be found on the Air District website at http://www.valleyair.org/transportation/GAMAQI-2015/GAMAQI-Criteria-Pollutant-Thresholds-of-Odors.pdf.

DEFINITIONS

Definitions

Air Quality Plan (AQP) - An air quality plan is a plan for reaching attainment of an air quality standard. The assumptions, inputs, and control measures are analyzed to determine if the air basin can reach attainment for the ambient air quality standard for the subject pollutant. In order to show attainment of the standard, the Air District analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The Air District then formulates a control strategy to reach attainment.

Ambient Air Quality Standards - These standards measure outdoor air quality. They identify the maximum acceptable average concentrations of air pollutants during a specified period of time. These standards have been adopted at a State and Federal level.

Best Available Control Measures (BACM) - A set of programs that identify and implement potentially best available control measures affecting local air quality issues.

Carbon Monoxide (CO) - Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone).

Hydrogen Sulfide (H_2S) - Hydrogen sulfide is a highly toxic flammable gas. Because it is heavier than air, it tends to accumulate at the bottom of poorly ventilated spaces.

Lead (Pb) - Lead is the only substance which is currently listed as both a criteria air pollutant and a toxic air contaminant. Smelters and battery plants are the major sources of the pollutant "lead" in the air. The highest concentrations of lead are found in the vicinity of nonferrous smelters and other stationary sources of lead emissions. The EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter ($\mu g/m^3$) [measured as a quarterly average].

Mobile Source - A mobile emission source is a moving object, such as on-road and off-road vehicles, boats, airplanes, lawn equipment, and small utility engines.

Nitrogen Oxides (Oxides of Nitrogen, NO_x) - NO_x are compounds of nitric oxide (NO) and nitrogen dioxide (NO_2). NO_x are primarily created from the combustion process and are a major contributor to ozone smog and acid rain formation. NOx also forms ammonium nitrate particulate in chemical reactions that occur when NOx forms nitric acid and combines with ammonia. Ammonium nitrate particulate is an important contributor to PM10 and PM2.5.

Ozone (O_3) - Ozone is a pungent, colorless, toxic gas created in the atmosphere rather than emitted directly into the air. O_3 is produced in complex atmospheric reactions involving oxides of nitrogen, reactive organic gases (ROG), and ultraviolet energy from the sun in a photochemical reaction. Motor vehicles are the major sources of O_3 precursors.

Ozone Precursors - Chemicals such as non-methane hydrocarbons, also referred to as ROG, and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, a major component of smog.

Photochemical - Some air pollutants are direct emissions, such as the CO produced by an automobile's engine. Other pollutants, primarily O_3, are formed when two or more chemicals react (using energy from the sun) in the atmosphere to form a new chemical. This is a photochemical reaction.

Particulate Matter 2.5 Micrometers ($PM_{2.5}$) - The federal government has recently added standards for smaller dust particulates. PM2.5 refers to dust/particulates/aerosols that are 2.5 microns in diameter or smaller. Particles of this size can be inhaled more deeply in the lungs and the chemical composition of some particles is toxic and has serious health impacts.

Particulate Matter 10 Micrometers (PM_{10}) - Dust and other particulates exhibit a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. PM10 refers to dust/particulates that are 10 microns in diameter or smaller. The fraction of PM between PM2.5 and PM10 is comprised primarily of fugitive dust. The particles between PM10 and PM2.5 are primarily combustion products and secondary particles formed by chemical reactions in the atmosphere.

Reactive Organic Gas (ROG) - A photo chemically reactive chemical gas composed of non-methane hydrocarbons that may contribute to the formation of smog. This is also sometimes referred to as Volatile Organic Compounds (VOCs).

Reasonable Available Control Measures (RACM) - A broadly defined term referring to technologies and other measures that can be used to control pollution. They include Reasonably Available Control Technology and other measures. In the case of PM10, RACM refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves, and open burning. Regional Transportation Planning Agencies are required to implement RACM for transportation sources as part of the federal ozone attainment plan process in partnership with the Air District.

San Joaquin Valley Air Basin (SJVAB) - An air basin is a geographic area that exhibits similar meteorological and geographic conditions. California is divided into 15 air basins to assist with the statewide regional management of air quality issues. The SJVAB extends in the Central Valley from San Joaquin County in the north to the valley portion of Kern County in the south (including San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern Counties).

San Joaquin Valley Unified Air Pollution Control District (Air District) - The Air District is the regulatory agency responsible for developing air quality plans (AQPs), monitoring air quality, developing air quality regulations, and permitting programs on stationary/industrial sources and agriculture and reporting air quality data for the SJVAB. The Air District also regulates indirect sources and has limited authority over transportation sources through the implementation of transportation control measures (TCM).

Sensitive Receptors - Sensitive receptors are defined as land uses that typically accommodate sensitive population groups such as long-term health care facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds.

Sensitive Population Groups - Sensitive population groups are a subset of the general population that are at greater risk than the general population to the effects of air pollution. These groups include the elderly, infants and children, and individuals with respiratory problems, such as asthma.

Sulfur Dioxide (SO_2) - Sulfur dioxide belongs to the family of SOx. These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes.

Stationary Source - A stationary emission source is a non-mobile source, such as a power plant, refinery, or manufacturing facility.

Sulfates - Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. SOx can form sulfuric acid in the atmosphere that in the presence of ammonia forms ammonium sulfate particulates, a small but important component of PM_{10} and $PM_{2.5}$. Sulfates increase the acidity of the atmosphere and form acid rain.

Transportation Conformity - A federal requirement for transportation plans and Projects to demonstrate that they will not result in emissions that exceed attainment plan emission budgets or exceed air quality standards.

Transportation Control Measures (TCMs) - Any measure that is identified for the purposes of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions.

Transportation Management Associations (TMAs) - Groups of employers uniting together to work collectively to manage transportation demand in a particular area.

Tulare County Association of Governments (TCAG) - TCAG is the Transportation Planning Agency (TPA) for Tulare County. TCAG is also designated as a Metropolitan Planning Organization (MPO), the agency responsible for preparing long range Regional Transportation Plans and demonstrating Transportation Conformity with air quality plans (AQPs).

Wood-burning Devices - Wood-burning devices are designed to burn "solid fuels" such as cordwood, pellet fuel, manufactured logs, or any other non-gaseous or non-liquid fuels.

Abbreviations and Acronyms

Air District San Joaquin Valley Unified Air Pollution Control District

ARB	California Air Resources Board
BACM	Best Available Control Measures
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CH_4	Methane
CO	Carbon Monoxide
EPA	Environmental Protection Agency
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
HI	Hazard Index
H_2S	Hydrogen Sulfide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
NESHAPs	National Environmental Standards for Hazardous Air Pollutants
O_3	Ozone
Pb	Lead
$PM_{2.5}$	Particulate Matter 2.5 Micrometers
PM_{10}	Particulate Matter 10 Micrometers
RACM	Reasonable Available Control Measures
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SJVAPCD	San Joaquin Valley Unified Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminants
TCAG	Tulare County Association of Governments
TCM	Transportation Control Measures
VOC	Volatile Organic Compound

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Biological Resources
Chapter 3.4

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, Plan Update or Update) will result in ***Less Than Significant Impacts With Mitigation*** to Biological Resources through the Year 2030 Planning horizon. A Biological Evaluation (BE) conducted by qualified expert consultants Live Oak Associates is included in Appendix "B" of this document, and is used as the basis for the determination that this Project will result in less than significant impacts. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

"Live Oak Associates, Inc. (LOA) conducted a biological study of the 3,154-acre area ("planning area") included in the 2020 Cutler-Orosi Community Plan, and evaluated likely impacts to such resources resulting from future development of the planning area as provided for in the Community Plan. The planning area encompasses the unincorporated communities of Cutler and Orosi in Tulare County, California. It is generally bounded by Avenue 424 on the north, Road 120 on the west, Avenue 400 on the south, and the Road 132 alignment on the east. In April of 2021, LOA surveyed the planning area for its biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the planning area include orchard/vineyard, urban, agricultural field, grassland/pasture, rural developed, ruderal, artificial pond/basin, and waterway. A mosaic of agricultural and urban land uses surround the planning area, within a region dominated by similar land uses. The planning area contains an engineered, leveed segment of Sand Creek and portions of Tout Ditch, Bump and Edmiston Ditch, and Bowhay Ditch. The Central Valley Regional Water Quality Control Board may assert jurisdiction over any of these features, and the California Department of Fish and Wildlife is likely to assert jurisdiction over Sand Creek. None of the planning area's hydrological features appear to meet the definition of a Water of the U.S. under the new Navigable Waters Protection Rule; however, the U.S. Army Corps of Engineers is the final arbiter of such determinations.

Potentially significant impacts to biological resources associated with future development of the planning area include construction-related loss of Sanford's arrowhead individuals or populations; construction-related mortality of western pond turtles, Swainson's hawks, burrowing owls, other nesting raptors and migratory birds (including tricolored blackbird, white-tailed kite, and loggerhead shrike), and colonially roosting bats; project-related loss of

Swainson's hawk foraging habitat and burrowing owl nesting, roosting, and foraging habitat; and project-related loss of riparian trees. These impacts can be reduced to a less than significant level under the California Environmental Quality Act (CEQA) by (1) conducting preconstruction surveys for sensitive resources, (2) avoiding or relocating any Sanford's arrowhead populations that are found in future project areas, (3) relocating any western pond turtles that are found in or around aquatic habitat to be impacted by future projects, (4) avoiding active bird/bat nests and roosts, (5) providing compensatory mitigation for project-related loss of Swainson's hawk and burrowing owl habitat, should the active nests/roosts of these birds be documented within or near future project areas, and (6) providing compensatory mitigation for any loss of riparian trees that results from future project activities.

Impacts associated with future development of the planning area would be less than significant, as defined by CEQA, for all other locally-occurring special status plants and animals, jurisdictional waters, wildlife movement corridors, sensitive natural communities, designated critical habitat, and local policies and habitat conservation plans. With the exception of the Swainson's hawk and burrowing owl, loss of habitat for special status animal species is considered a less than significant impact under CEQA."[1]

"As discussed in Sections 2.3.8 [of the BE], the hydrologic features in the planning area include an approximately 2.9-mile reach of Sand Creek, an approximate 1.4-mile reach of Tout Ditch, an approximately 0.37-mile reach of Bump and Edmiston Ditch, and an approximately 0.25-mile reach of Bowhay Ditch. Under the Navigable Waters Protection Rule, it appears none of these features meet the definition of Waters of the U.S.; however, Sand Creek is likely to fall under the jurisdiction of CDFW, and any of the planning area's waterways or artificial ponds/basins may be regulated by the RWQCB."[2]

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

As indicated by the California Department of Fish and Wildlife (CDFW) in regard to CEQA, "CDFW is California's Trustee Agency for the State's fish, wildlife, and plant resources. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitats necessary for biologically sustainable populations of those species. For the purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources."[3]

"State and local public agencies must comply with CEQA before making a discretionary approval of a project. Compliance can be met by determining a project is exempt from CEQA or

[1] *"Cutler-Orosi Community Plan Update Biological Evaluation Tulare County, California."* May 2021. Page i. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of the Draft EIR.
[2] Ibid. 53.
[3] CDFW California Environmental Quality Act (CEQA) Review. Accessed June 2021 at: https://wildlife.ca.gov/Conservation/Environmental-Review/CEQA

preparing an environmental analysis, typically a negative declaration (ND), mitigated negative declaration (MND) or environmental impact report (EIR). MNDs and EIRs identify and contain an analysis of a project's significant environmental effects and discuss feasible measures to avoid or mitigate those effects. EIRs also analyze a reasonable range of potentially feasible alternatives to the proposed project that would avoid or substantially lessen the project's significant effects. Compliance with other environmental laws and regulations is also typically discussed in an MND or EIR."[4]

The California Environmental Quality Act (CEQA; California Public Resources Code §§ 21000-21177) requires that State agencies, local governments, and special districts evaluate and disclose impacts from "Projects" in the State. CEQA Guidelines Section 15380 clearly indicates that species of special concern (SSCs) should be included in an analysis of Project impacts if they can be shown to meet the criteria of sensitivity.

CEQA Guidelines Sections 15063 and 15065 address how an impact is identified as significant. These sections are particularly relevant to SSCs. Project-level impacts to listed rare, threatened, or endangered species are generally considered significant, and therefore require lead agencies to prepare an Environmental Impact Report to fully analyze and evaluate the impacts. In determining to assign "impact significance" to populations of non-listed species, factors which are usually considered include population-level effects, proportion of the species' range affected by a Project, regional effects, and impacts to habitat features.

This section of the Draft Environmental Impact Report (DEIR) for the Project meets CEQA requirements by addressing potential impacts to biological resources on the proposed Project site, which is located in a portion of the San Joaquin Valley in Tulare County. The "Environmental Setting" section provides a description of biological resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Thresholds of Significance

The geographical area may be either statewide or nationwide, depending on the sensitive status of the species. Standards for listing as federal endangered species are determined by the Federal Endangered Species Act, administered by U.S. Department of Fish and Wildlife. Standards for listing of California special status species (Endangered, Threatened, Candidate Endangered, Candidate Threatened, and Sensitive Species) are administered by the California Department of Fish and Wildlife (DFW). These requirements are described in further detail in the "Regulatory" section of this document.

ENVIRONMENTAL SETTING

[4] Ibid.

Regional Setting

The planning area is located on the eastern side of the San Joaquin Valley. The San Joaquin Valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the central San Joaquin Valley (and the planning area) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 100 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the project is about 11 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the project vicinity is Sand Creek, which drains the lower Sierra Nevada foothills northeast of the planning area and flows southwest through Orosi and along the western edge of Cutler in an engineered leveed channel. Downstream of the planning area, it flows into Cottonwood Creek, which in turn feeds Cross Creek and ultimately the Tule River.

The planning area is situated within agricultural lands dominated by orchards near the toe of Stokes Mountain, which marks the transition from the valley floor to the lower foothills of the Sierra Nevada. The nearest natural lands are located approximately 1.5 miles to the east, and consist of open rangeland associated with Stokes Mountain. The planning area is separated from Stokes Mountain by intensive agricultural uses and the Friant-Kern Canal."[5]

Planning Area

"The planning area is characterized by urban uses associated with the communities of Cutler and Orosi and a variety of rural uses that separate and surround these communities. The topography of the planning area is relatively level, ranging from 392 feet National Geodetic Vertical Datum (NGVD) at its northeastern extent to 350 feet NGVD at its southwestern extent.

Eight soil mapping units were identified within the planning area: San Joaquin loam, 0-2 percent slopes; Hanford sandy loam, 0-2 percent slopes; Honcut sandy loam, 0-2 percent slopes; Tujunga sand; Porterville clay, 0-2 percent slopes; Exeter loam, 0-2 percent slopes; Greenfield sandy loam, typic haploxeralfs, well drained, 0-2 percent slopes; Flamen loam, moderately well drained, 0-2 percent slopes (NRCS 2021). The San Joaquin loam, Exeter loam, and Flamen loam mapping units are considered hydric under natural conditions. Hydric soils have the propensity to pond water in depressions, forming vernal pools that can provide habitat for plant and animal species unique to this environment, including certain state and federally listed species. However, due to long-term management, soils of the planning area exhibited no characteristics of hydric soils."[6]

[5] *"Cutler-Orosi Community Plan Update Biological Evaluation Tulare County, California."* May 2021. Page 6. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of the Draft EIR.
[6] Ibid. 6-7.

Biotic Habitats/Land Uses

"Eight biotic habitat/land use types were identified within the planning area during the April 2021 biological field survey: urban, orchard/vineyard, agricultural field, ruderal, rural developed, grassland/pasture, artificial pond/basin, and waterway (Figure 3 [Figure 3.4-1 in this Draft EIR]). These habitats/land uses and their constituent plant and animal species are described in more detail below. A list of the vascular plant species observed within the planning area and the terrestrial vertebrates using, or potentially using, the planning area are provided in Appendices A and B [of the Biological Evaluation], respectively. Selected photographs of the planning area are presented in Appendix C [of the Biological Evaluation].

Urban

The planning area was largely characterized by urban uses associated with the communities of Cutler and Orosi. At the time of the field survey, these uses consisted of single- and multi-family residential neighborhoods, commercial centers, schools, sports complexes and city parks, industrial areas, and other developments and infrastructure associated with urbanized communities, as well as a number of vacant lots. Ornamental trees and shrubs that had been planted in urban areas of the planning area included white mulberry (Morus alba), Chinese elm (Ulmus parvifolia), Alexandrina magnolia (Magnolia alexandrina), Italian cypress (Cupressus sempervirens), coast redwood (Sequoia sempervirens), incense cedar (Calocedrus decurrens),

Mexican fan palm (Washingtonia robusta), ribbon fan palm (Livistona decipiens), Mexican blue palm (Brahea armata), Jacaranda (Jacaranda mimosifolia), cultivated pine (Pinus sp.), oleander (Nerium oleander), crape myrtle (Lagerstroemia sp.), and cultivated rose (Rosa sp.), among others. Industrial portions of the urban areas were generally devoid of vegetation.

A number of wildlife species adapted to human disturbance could be expected to occur in urban areas of the planning area. For example, amphibians such as Sierran tree frogs (Pseudacris sierra) and western toads (Bufo boreas) may breed and forage in wet areas associated with residential areas or parks, and reptiles such as the western fence lizard (Sceloporus occidentalis) and common garter snake (Thamnophis sirtalis) could occur in this land use type. Buildings and other human-made structures provide potential nesting habitat for the house finch (Haemorhous mexicanus), house sparrow (Passer domesticus), and Eurasian collared dove (Streptopelia decaocto); all were observed during the field survey. Trees and shrubs associated with residences could be used for nesting by a variety of avian species, including the Bullock's oriole (Icterus bullockii), northern mockingbird (Mimus polyglottos), and Anna's hummingbird (Calypte anna). Other birds known to occur in urban lands of the planning area include rock pigeons (Columba livia), mourning doves (Zenaida macroura), California scrub jays (Aphelocoma californica), American robins (Turdus migratorius), and American crows (Corvus brachyrhynchos).

Mammal species attracted to this land use type may include Botta's pocket gopher (Thomomys bottae), house mouse (Mus musculus), Norway rat (Rattus norvegicus), and Virginia opossum

(Didelphis virginiana). Numerous Botta's pocket gopher burrows were observed throughout Ledbetter Park.

Birds of prey may occasionally forage over the urban areas. The red-tailed hawk (Buteo jamaicensis), American kestrel (Falco sparverius), and Cooper's hawk (Accipiter cooperi) are likely visitors.

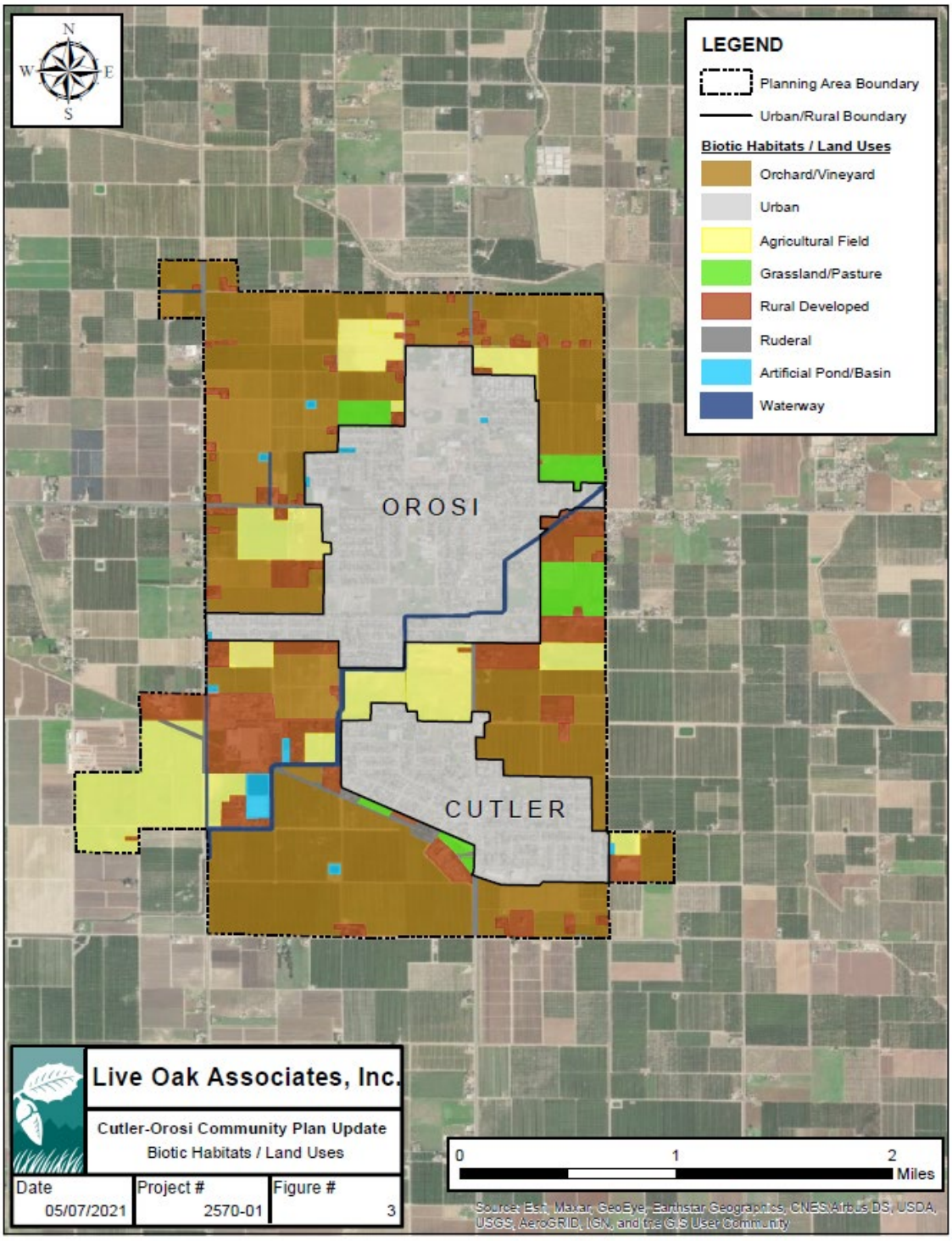
Orchard/Vineyard

Orange (Citrus sinensis) and European olive (Olea europaea) orchards and vineyards at various stages of maturity comprised a large portion of the planning area. Being highly maintained, these orchards and vineyards were mostly barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards and vineyards provide marginal habitat for amphibians; however, Sierran tree frogs and western toads may disperse through orchard lands during the winter and spring. A limited number of reptile species would be expected to forage in orchards and vineyards of the planning area due to the lack of sun required by these species for thermal regulation; however, the western fence lizard, Pacific gopher snake (Pituophis catenifer catenifer), common kingsnake (Lampropeltis californiae), and northern Pacific rattlesnake (Crotalus oreganus oreganus) may occasionally occur.

Orchards and vineyards provide foraging and nesting habitat for a number of avian species. Mature orchards could be used for nesting by the American robin, mourning dove, and western kingbird (Tyrannus verticalis). Winter migrants such as the white-crowned sparrow (Zonotrichia leucophrys) may forage on dormant buds in the orchards and vineyards of the planning area, while resident birds such as the European starling (Sturnus vulgaris) and house finch would be expected to forage on ripening fruit.

Figure 3.4-1
Biotic Habitats/Land Uses



A few small mammal species would be expected to occur within the orchards and vineyards of the planning area. These include deer mice (Peromyscus maniculatus), California voles (Microtus californicus), house mice, Botta's pocket gophers, California ground squirrels (Otospermophilus beecheyi) and Audubon cottontail rabbits (Sylvilagus audubonii). California ground squirrels were observed foraging in the orchards. Various species of bat may forage over orchard and vineyard habitat for flying insects or glean insects from the leaves of trees and vines. Foraging raptors and mammalian predators may occur in the orchards and vineyards of the planning area from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks and sharp-shinned hawks (Accipiter striatus) may forage for small birds in orchards, and red-tailed hawks and American kestrels may forage over vineyards. Mammalian predators potentially occurring in the orchards and vineyard of the planning area would include raccoons (Procyon lotor), striped skunks (Mephitis mephitis), coyotes (Canis latrans) and red foxes (Vulpes vulpes).

Agricultural Field

The planning area contained a number of agricultural fields that, at the time of LOA's survey, were either in active cultivation or fallow. The cultivated fields were planted to wheat, alfalfa, and various row crops, and were generally devoid of vegetation other than the planted crop. The fallow fields showed evidence of past cultivation (furrows, check dams, old irrigation infrastructure, leftover grain crops), but, at the time of the survey, supported a variety of naturalized non-native grasses and forbs such as Canadian horseweed (Erigeron canadensis), prickly lettuce (Lactuca serriola), red-stemmed filaree (Erodium cicutarium), wall barley (Hordeum murinum), ripgut brome (Bromus diandrus), fiddleneck (Amsinckia menziesii), curly dock (Rumex crispus) and cheeseweed (Malva parviflora).

Intensive agricultural practices in the planning area's cultivated fields likely limit their value to wildlife; however, some wildlife species undoubtedly occur in the fields. Amphibians with the potential to use the fields include Sierran tree frogs and western toads, both of which may breed in nearby irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the western fence lizard, side-blotched lizard (Uta stansburiana), Pacific gopher snake, common kingsnake, and northern Pacific rattlesnake. Generally speaking, fields that are fallowed experience less frequent anthropogenic disturbance and may support larger populations of rodents and other small vertebrates, with increased predator activity.

The site's agricultural fields provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the planning area include the northern mockingbird, European starling, western meadowlark (Sturnella neglecta), red-tailed hawk, northern harrier (Circus cyanus), American kestrel, mourning dove, Eurasian collared dove, house finch, American crow, Brewer's blackbird (Euphagus cyanocephalus), and brown-headed cowbird (Molothrus ater); house finches, Eurasian collared doves, and Brewer's blackbirds were observed during the field survey. Summer migrants that would be common in the agricultural fields of the planning area include the western kingbird, while winter migrants may include the savannah sparrow (Passerella sandwichensis) and white-crowned sparrow; white-crowned sparrows and savannah sparrows were observed during the field survey.

Wheat and triticale fields in the San Joaquin Valley are commonly used for nesting by red-winged blackbirds (Agelaius phoeniceus) and tricolored blackbirds (Agelaius tricolor); the latter is listed as threatened under the California Endangered Species Act. No large flocks of blackbirds were observed during the surveys, however. When left fallow, the planning area's agricultural fields may support nesting by avian species that nest in ground vegetation, including the western meadowlark and mourning dove.

A few mammal species may occur within the agricultural fields of the planning area. Small mammals such as deer mice and California voles would occur in fluctuating numbers depending on the crop, disturbance regime, and season. Botta's pocket gophers and California ground squirrels could burrow around the perimeter of active fields, or within fields during fallow periods. Other small mammals that may occur from time to time within the agricultural fields of the planning area include black-tailed hares (Lepus californicus) and Audubon cottontail rabbits. Various species of bat may also forage over the fields of the planning area for flying insects. California ground squirrels were observed burrowing and foraging in many of the agricultural fields.

The presence of amphibians, reptiles, birds, and small mammals is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks and American kestrels may forage over agricultural fields of the planning area. Mammalian predators occurring in the agricultural fields of the planning area would include raccoons, striped skunks, coyotes, and red foxes.

Grassland/Pasture

Grassland/Pasture
Several blocks of open land were identified within the planning area that, while leveled and exhibiting signs of past cultivation and/or other ground disturbance, now appeared to function as naturalized non-native grassland or pasture habitat. Such areas supported a mix of primarily non-native grasses and forbs including ripgut brome, wild oats (Avena fatua), wall barley, black mustard (Brassica nigra), red-stem filaree, and fiddleneck. The areas used as pastures were fenced fields, generally 5-10 acres in size, that showed signs of use by livestock. Some of the pastures contained old cattle troughs and vacant livestock paddocks, while others housed smallherds of sheep and a few horses. Other grassland habitats were unfenced and did not appear to have any particular land use at the time of the surveys. The planning area's grassland/pasture habitats are surrounded by human development and are not representative of natural grasslands found elsewhere in the San Joaquin Valley. Vernal pools and swales are absent from all grassland/pastures of the planning area.

Grasslands/pastures of the planning area provide suitable habitat for a number of amphibian and reptile species. Common reptile species likely to forage and seek cover in this habitat include side-blotched lizards, western whiptails (Aspidoscelis tigris), gopher snakes, common kingsnakes, and northern Pacific rattlesnakes. Amphibian species expected to occur in the

grasslands/pastures of the planning area include the western toad, which could aestivate (oversummer) in rodent burrows of this habitat type.

Raptors known to utilize grassland/pasture habitats within the planning area include the red-tailed hawk and American kestrel. The northern harrier would also be expected in this habitat. Other resident avian species expected in this habitat include common ravens (Corvus corax), mourning doves, and western meadowlarks. Spring and summer migrants that frequent these grasslands/pastures would include barn swallows (Hirundo rustica) and western kingbirds. Common winter migrants attracted to grasslands/pastures of the region include savannah sparrows, American pipits (Anthus rebescens), and Say's phoebes (Sayornis saya).

A number of small mammal species would be expected to use grasslands/pastures of the planning area, including California ground squirrels, Botta's pocket gophers, California voles, deer mice, and house mice. Large mammalian species expected to use this habitat type include the coyote and gray fox (Urocyon cinereoargenteus). Various species of bats would be expected to forage over the grasslands/pastures.

Rural Developed

Outside of the urban areas of Cutler and Orosi, agricultural lands are interspersed with rural residences and several small commercial/industrial complexes. These rural developed lands include homes and other structures, landscaping, driveways and parking areas, and, in some cases, small pastures and ruderal areas adjacent to buildings. Given the scope of this investigation and the scale of the planning area, all the habitat types of each rural developed property were not delineated. Landscaping observed around many homes was extensive and often included mature non-native trees and shrubs. Horticultural species observed included tall palms such as the Mexican fan palm, conifers such as coast redwood (Sequoia sempervirens) and deodar cedar (Cedrus deodora), orchard trees including black walnut (Juglans nigra) and European olive (Olea europea), fruitless mulberry (Morus alba), acacia trees (Acacia sp.) and various shrubs such as oleander and crape myrtle.

Reptile use of the planning area's rural developed lands would be similar to that described for the surrounding agricultural areas. Avian species expected in rural developed lands include a mix of the same species that would be found in nearby urban and agricultural areas. Residential landscaping provides cover and nesting opportunities for resident birds such as California scrub jays, house finches, house sparrows, and northern mockingbirds. The cover provided by horticultural trees and shrubs can also be important to migrants passing through the area during spring and fall. Larger trees in this area provide nesting habitat for raptors such as red-tailed hawks, red-shouldered hawks (Buteo lineatus), and potentially Swainson's hawks (Buteo swainsoni). Active nest building and brooding behavior of mourning doves, Eurasian collared doves, and red-tailed hawks was observed in a row of trees lining the driveway of a rural development within a citrus orchard along Avenue 400.

Small mammals that commonly occur in rural developed areas include California ground squirrels, deer mice, Norway rats, and house mice. Botta's pocket gophers and broad-footed

moles (Scapanus latimanus) are regularly found in garden beds and lawns. California ground squirrels were observed in rural developed areas during the field surveys. Bats of various species may roost in residential buildings and forage overhead. Mammalian predators in this area would include the coyote, raccoon, and striped skunk.

Ruderal

The ruderal land use type includes disturbed, open habitats such as lots where trash burning or dumping occurs, construction sites, barren land, and transportation corridors. Given the scope of this investigation and the scale of the planning area, roads were generally not mapped as ruderal habitat, but were included with adjacent land uses. Ruderal lands of the planning area contained no vegetation or a sparse cover of common weeds, such as ripgut brome, Canada horseweed, prickly lettuce, red-stemmed filaree, wild oats (Avena fatua), wall barley, and silverleaf nightshade (Solanum elaeagnifolium).

Although the wildlife habitat value of ruderal lands within the planning area is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for agricultural fields could potentially use ruderal habitats of the planning area, as well. Mourning doves and northern mockingbirds could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (Charadrius vociferous), which often nests on gravel or bare ground; all three species were observed during the field survey.

Small mammals that would be expected to occur on ruderal lands of the planning area include California ground squirrels, Botta's pocket gophers, deer mice, California voles, and house mice. Ground squirrel and gopher burrows were observed sporadically along the ruderal margins of roads at the time of the field survey. Mammalian predators with the potential to occur on ruderal lands of the planning area include disturbance-tolerant species such as the raccoon, red fox, and coyote.

Artificial Pond/Basin

A number of human-constructed basins were identified within the planning area, including basins used for stormwater detention, wastewater treatment, and agricultural purposes. Several of the basins were located on private land and not accessible during the field survey, but were identified and mapped using aerial imagery. Of the five basins that were accessible, only one was inundated at the time of the survey. That basin, located on Whittaker Avenue, was a stormwater detention basin containing approximately 10 to 20 inches of water. Cattails (Typha sp.) covered 25 percent of the surface area and floating aquatic plants and algae covered much of the water's surface. The banks of the basin were vegetated with non-native grasses, curly dock, and other weedy species. The remaining accessible basins were all dry at the time of the survey, and supported cattails, curly dock, and upland grass species.

Wildlife use of agricultural basins would vary depending on the timing and degree to which the basins are inundated or saturated. During periods of inundation, amphibians such as the Sierran tree frog, western toad, and invasive American bullfrogs (Lithobates catesbeianus) could

opportunistically breed in the basins and subsequently disperse through surrounding lands. American bullfrogs were observed in the inundated basin on Whittaker Avenue. During dry periods, reptile and amphibian use of the basins would be similar to that described for agricultural fields of the planning area.

Birds expected to use the planning area's basins during periods of inundation may include the great blue heron (Ardea herodias), great egret (Ardea alba), black phoebe (Sayornis nigricans), great-tailed grackle (Quiscalus mexicanus), and various species of geese and ducks. In the basin on Whittaker Avenue, a Canada goose (Branta canadensis) was observed brooding on a nest at the edge of the water, and mallards (Anas platyrhynchos) were observed foraging in the water. When the basins are saturated but not inundated, avian use may include those species that feed on mudflats, such as the killdeer. When the basins are dry, avian use would be similar to that described for agricultural fields and ruderal habitats of the planning area.

Periodic inundation likely precludes occupation of the basin floors by burrowing rodents; however, Botta's pocket gophers and California ground squirrels could burrow on the banks. Deer mice and western harvest mice could also inhabit the margins of the basins and could forage for insects, seeds, and plant parts in the basins when the basins are dry. Mammalian predator and raptor use of the basins would be similar to that described for other habitats of the planning area.

Waterway

The planning area contains portions of Sand Creek and three irrigation ditches: Tout Ditch, Bump and Edmiston Ditch, and Bowhay Ditch. All four waterways are engineered, earthen channels that appear to experience seasonal inundation, based on field characteristics and analysis of aerial imagery.

At the time of the field survey, Sand Creek was dry throughout its 2.9-mile length within the planning area and averaged 50 feet in width between bank tops. Its bed and banks supported amix of upland and wetland vegetation including nonnative grasses, California mugwort (Artemisia douglasiana), rough cocklebur (Xanthium strumarium), and curly dock. Where Sand Creek passed along the western edge of Cutler, it supported intermittent stands of riparian trees such as sandbar willow (Salix exigua) and Fremont cottonwood (Populus fremontii). Old cliff swallow (Petrochelidon pyrrhonota) nests were found under the bridge spanning the creek on Road 128. Tout Ditch, which travelled along the western edge of the planning area for approximately 1.4 miles, carried no flowing water at the time of the survey, but one or more pools of water remained in channel depressions. The ditch was sparsely vegetated with ruderal weed species and averaged 20 feet in width between bank tops. The Bump and Edmiston Ditch traversed the northwestern portion of the planning area both above and below ground, with aboveground reaches totaling 0.37 mile. The Bowhay Ditch ran along the eastern boundary of the planning area, passing through the planning area for a distance of approximately 0.25 mile in east Cutler. The latter two ditches were dry and sparsely vegetated at the time of the survey, and averaged 10 feet or less in width between bank tops.

Wildlife use of the planning area's waterways would vary depending on the inundation regime. During inundated periods, the Sierran tree frog, western toad, and introduced American bullfrog could breed in these features. Inundated canals and ditches may also support mosquitofish, as observed in one of the siphons of Tout Ditch at the time of the field survey. These species, in turn, would attract common garter snakes and aquatic garter snakes (Thamnophis atratus) to forage in this habitat, along with wading birds such as the great blue heron and great egret."[7]

Special Status Plants and Animals

"Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."

A search of published accounts for all locally-occurring special status plant and animal species was conducted for the Orange Cove South USGS 7.5-minute quadrangle, in which the planning area occurs, and the eight surrounding quadrangles (Wahtoke, Reedley, Traver, Monson, Ivanhoe, Stokes mtn, Tucker mtn, and Orange Cove North) using the CNDDB Rarefind 5 (2021) program. These species, and their potential to occur within the planning area, are listed in Table 1 in the following pages and depicted in Figures 4a, 4b, and 5. Sources of information for Table 1 included California's Wildlife, Volumes I, II, and III (Zeiner et. al 1988-1990), California Natural Diversity Data Base (CDFW 2021), and The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records."[8]

As summarized in Table 3.4.1 (Table 1 of the Biological Evaluation, Appendix "B" of this DEIR) and described in the narrative on page 48 of the Biological Evaluation; "Of the 18 special status animal species potentially occurring in the region, eleven species have the potential to occur within the PPSA. These species include the Swainson's hawk, San Joaquin kit fox, white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), lesser sandhill crane (*Grus canadensis canadensis*), burrowing owl, loggerhead shrike (*Lanius ludovicianus*), tricolored blackbird (*Agelaius tricolor*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis* spp. *californicus*), and American badger. The northern harrier and lesser sandhill crane

[7] Op. Cit. 7-17.
[8] Op. Cit. 17-18.

would be expected to use the PPSA for foraging only, while the remaining species have the potential to breed or forage within the PPSA."[9]

Table 3.4-1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

PLANTS (adapted from CDFW 2021 and CNPS 2021

Species	Status	Habitat	Occurrence within the Planning Area
Hoover's Spurge (*Chamaesyce hooveri*)	FT CNPS 1B	This annual occurs in vernal pools of California's Central Valley; blooms July-September; elevation 80-820 ft.	**Absent.** Suitable vernal pool habitat is absent from the planning area, The nearest known populations of this species are approximately 3 miles southeast of the planning area, in natural lands associated with the Stone Corral Ecological Reserve (SCER). The nearest critical habitat for this species is located 1.8 miles southeast of the planning area.
San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)	FE, CE CNPS 1B	This annual occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation; blooms April-September; elevation 100-2,480 ft.	**Absent.** Suitable vernal pool habitat for the San Joaquin Valley orcutt grass is absent from the planning area. The closest documented occurrence of this species is approximately 6 miles south of the planning area, in SCER natural lands. The nearest critical habitat for this species is located 2.8 miles southwest of the planning area.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	**Absent.** Porterville clay soil is found on site in the northeast corner of the planning area, but this land is heavily altered by commercial citrus orchard operations and is unsuitable for this species. The closest documented occurrence is approximately 3 miles east of the planning area, in natural lands associated with Stokes Mountain.
Earlimart Orache (*Atriplex cordulata* var. *erecticaulis*)	CNPS 1B	This annual occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Historic and ongoing human disturbance of the planning area has rendered habitats unsuitable for this species. The nearest documented occurrence is 2.4 miles southeast of the planning area, in SCER natural lands.
Brittlescale (*Atriplex depressa*)	CNPS 1B	Occurs in relatively barren areas within alkali grassland, meadow and scrub. Elevations up to 1,000 ft. Blooms April-October.	**Absent.** Suitable habitat and soils for this species are absent from the planning area.
Lesser Saltscale (*Atriplex minuscula*)	CNPS 1B	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils; blooms May-October; elevations below 700 ft.	**Absent.** Historic and ongoing human disturbance of the planning area has rendered habitats unsuitable for this species.
Vernal Pool Smallscale (*Atriplex persistens*)	CNPS 1B	This diminutive annual occurs in alkaline vernal pools; blooms July-October; elevations below 400 ft	**Absent.** Suitable vernal pool habitat is absent from the planning area
Recurved Larkspur (*Delphinium recurvatum*)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and	**Absent.** Historic and ongoing human disturbance of the planning area has

[9] Op. Cit.

Table 3.4-1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

		grasslands; blooms March-June; elevations below 2,500 ft.	rendered habitats unsuitable for this species.
Kings River Buckwheat (Eriogonum nudum var. regirivum)	CNPS 1B	Occurs in cismontane woodland on rocky limestone slopes along the Kings River between 1,100 and 6,000 ft. in elevation. Blooms April-Nov.	**Absent.** The planning area does not contain suitable habitat for the Kings River buckwheat, and is located outside of this species' elevational range.
Spiny-Sepaled Button Celery (*Eryngium spinoseplaum*)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
American Manna Grass (*Glyceria grandis*)	CNPS 2B	Occurs in bogs and fens, meadows and seeps, marshes and swamps, ditches, streams, and ponds, in valleys and lower elevations in the mountains between 200 and 6,700 ft. in elevation. Blooms June-Aug.	**Absent.** The planning area's ditches are highly maintained and unlikely to support this species. Moreover, local occurrences are over 100 years old and in mountainous habitat 14 and 17 miles to the northeast of the planning area.
Winter's Sunflower (*Helianthus winteri*)	CNPS 1B	Occurs in openings on relatively steep south-facing slopes in cismontane woodland and valley and foothill grassland habitat, often on roadsides; blooms Jan.-Dec.; 400 to 1,500 ft. in elevation.	**Absent.** Suitable habitat and topography are absent from the planning area.
California Satintail (*Imperata brevifolia*)	CNPS 2B	This perennial grass is found in scrubland and chaparral habitats where water is available, at elevations up to 4,000 feet. Blooms September-May.	**Absent.** Suitable habitat for this species is absent from the planning area.
Alkali-Sink Goldfields (*Lasthenia chrysantha*)	CNPS 1B	Endemic to California's Central Valley, where it grows in vernal pools and alkali flats. Blooms February-June.	**Absent.** Suitable habitat is absent from the planning area.
Coulter's Goldfields (*Lasthenia glabrata ssp. coulteri*)	CNPS 1B	Usually found on alkaline soils in playas, sinks, and grasslands at elevations below 4,500 feet. Blooms February-June.	**Absent.** Suitable habitat and soils are absent from the planning area.
California Alkali Grass (*Puccinellia simplex*)	CNPS 1B	Occurs in alkali sinks and flats within grassland and chenopod scrub habitats of the Central Valley, San Francisco Bay area and western Mojave Desert; elevations below 3,000 feet. Blooms March-May.	**Absent.** Suitable habitat and soils are absent from the planning area.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CNPS 1B	Occurs in freshwater marshes, swamps, and occasionally irrigation ditches in California's Central Valley; blooms May-October; elevation up to 2000 ft.	**Possible.** This species is known from the immediate vicinity of the planning area. A population was found in the Alta East Branch Canal, immediately north of planning area boundaries, in 2017, and several other populations have been documented in the Alta East Branch Canal, Monson Ditch, and Wilson Ditch within 1 mile of the planning area. Suitable habitat for this species exists within Sand Creek.
ANIMALS (adapted from CDFW 2021)			
Species	**Status**	**Habitat**	**Occurrence within the Planning Area**
Vernal Pool Fairy Shrimp	FT	Occurs in vernal pools, clear to tea-	**Absent.** Habitat suitable for this species

Table 3.4-1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

(*Branchinecta lynchi*)		colored water in grass or mud-bottomed swales, and basalt depression pools.	is absent from the planning area.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools, but may use other seasonal wetlands in mesic valley and foothill grasslands.	**Absent.** Habitat suitable for this species is absent from the planning area site.
Valley Elderberry Longhorn Beetle (VELB) (Desmocerus californicus dimorphus)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills, generally along waterways and in floodplains.	**Absent.** The revised range of the valley elderberry longhorn beetle does not include Tulare County.
Foothill Yellow-legged Frog (*Rana boylii*)	CE, SSC	Occurs in rocky streams or pools in foothill woodlands or chaparral, with an isolated population on the floor of the Central Valley.	**Absent.** The planning area does not offer suitable habitat for this species.
California Tiger Salamander (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** Habitat suitable for breeding by CTS is absent from the planning area. Although rodent burrows theoretically suitable for CTS aestivation may occur throughout the planning area, the planning area consists of, and is surrounded by, a matrix of intensive anthropogenic uses incompatible with this species' ecological requirements, and CTS would not be able to persist here. The nearest documented occurrences are in the natural lands of the SCER, approximately 3 miles southeast of the planning area. The nearest critical habitat for this species is located 5.18 miles southwest of the planning area.
Swainson's Hawk (*Buteo swainsoni*)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Possible.** Swainson's hawks are relatively uncommon along the eastern edge of the San Joaquin Valley, where the planning area is situated. The closest known nesting occurrence is approximately 6 miles to the southwest (Hansen 2017), and no Swainson's hawks were observed during the survey. However, mature trees in rural portions of the planning area offer suitable nesting habitat for this species, and the planning area's agricultural fields and grassland/pasture habitats are suitable for foraging.
Willow Flycatcher (*Empidonax traillii*)	CE	Forages in dense willow-dominated riparian habitat, usually along rivers, streams, or other wetlands. Breeds at mid-high elevation in the Sierras.	**Absent.** Suitable riparian habitat for the willow flycatcher is absent from the planning area, and the site is located well outside of this species' breeding range.
Tricolored Blackbird (*Agelaius tricolor*)	CT	Breeds in fresh water with dense cattails, or thickets of willows or shrubs. Also known to breed in grain fields. Forages in grasslands and agricultural fields.	**Possible.** Although there are no known occurrences of the tricolored blackbird in the vicinity of the planning area, this species could conceivably forage in agricultural fields or grasslands/pastures of the planning area, and possibly nest in the fields when planted to a suitable

Table 3.4-1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

			substrate such as wheat or triticale.
San Joaquin Kit Fox (SJKF) (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (5 to 8 inches in diameter) ground squirrel burrows as denning habitat.	**Unlikely.** Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox occupation or use of the planning area and surrounding lands unlikely. There are only three known kit fox records within 10 miles of the planning area, all from the 1970s and 1980s.
Western Pond Turtle (*Emys marmorata*)	CSC	Open slow-moving water or ponds with rocks and logs for basking. Nesting occurs in open areas, on a variety of soil types, and up to ¼ mile away from water.	**Possible.** Western pond turtles could potentially occur in the planning area's waterways and basins when inundated. Nesting or overwintering in the planning area is unlikely, as all habitats adjoining the planning area's aquatic habitats are highly modified and subject to ongoing disturbance.
Western Spadefoot (*Spea hammondii*)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	**Absent.** Suitable breeding habitat is absent from the planning area, and the highly modified landscape of the planning area is generally incompatible with the ecological requirements of this species. The closest known spadefoot occurrence is approximately 3 miles southeast of the planning area, in the natural lands of the SCER.
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Possible.** Although no burrowing owls or burrowing owl sign were observed during the field survey, this species has some potential to nest and roost in the planning area's grassland/pasture habitats and ruderal areas and to forage in the grasslands/pastures and agricultural fields. There are several documented burrowing owl occurrences within 5 miles of the planning area, all in natural lands.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and occasionally agricultural hedgerows.	**Possible.** Shrikes could forage in the planning area's agricultural fields, grassland/pasture habitats, and ruderal lands, and could nest in trees and shrubs in rural portions of the planning area.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on the ground in high vegetation.	Northern harriers may occasionally forage in the agricultural fields and grassland/pasture habitats of the planning area. The planning area is unlikely to support nesting by this species.
White-tailed Kite (*Elanus leucurus*)	CFP	Occurs in savannah, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	**Possible.** White-tailed kites may forage over the planning area's agricultural fields and grassland/pasture habitats, and may potentially nest in mature trees in rural portions of the planning area; however, no white-tailed kite individuals or nests were observed during the field

Table 3.4-1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

			surveys.
(*Aquila chrysaetos*)	CFP	Inhabits a variety of habitats in California including forests, canyons, shrub lands, grasslands, and oak woodlands. Nests are constructed on platforms on steep cliffs or in large trees.	**Unlikely.** Golden eagles are known to occur in the foothills east of the planning area (eBird 2021) and may occasionally pass through the vicinity, but are not expected to utilize the planning area, where foraging habitat for this species is marginal and nesting habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** Individuals of this species could potentially roost in trees, bridges, or buildings in rural portions of the planning area, and forage in or over the planning area's agricultural fields, orchards, and grassland/pasture habitats. The nearest documented occurrence of the species is a roost site at a bridge over the Kings River, 10 miles west of the planning area.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Frequents open, semi-arid to arid habitats, including conifer, and deciduous woodlands, coastal scrub, grasslands, palm oasis, chaparral and urban. Roosts in cliff faces, high buildings, and tunnels.	**Possible.** This species is unlikely to roost within the planning area, but may potentially forage in flight over the planning area.
American Badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Unlikely.** Intensive agricultural practices, highly modified habitats, and ongoing disturbance make badger use of the planning area unlikely. There are no CNDDB records of the species in the vicinity of the planning area.

OCCURRENCE EXPLANATIONS: Key for terms or codes used in Table 3.4.1

Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the site, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FPT	Federal Endangered (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern
CNPS	**California Native Plant Society Listing**		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

There are two habitat conservation plans that apply in Tulare County: 1) Recovery Plan for Upland Species of the San Joaquin Valley, and 2) the Kern Water Bank Habitat Conservation Plan. The Kern Water Bank Habitat Conservation Plan also applies to Tulare County. This plan; however, only applies to an area in Allensworth.

Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest."

REGULATORY SETTING

Applicable Federal, State, and local regulations specific to biological resources are described below. The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County General Plan 2010 Background Report.

Federal Agencies & Regulations

Federal Endangered Species Act

"The U.S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (16 USC Section 153 et seq.) and thereby has jurisdiction over federally listed threatened, endangered, and proposed species. Projects that may result in a "take" of a listed species or critical habitat must consult with the USFWS. "Take" is broadly defined as harassment, harm, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collection; any attempt to engage in such conduct; or destruction of habitat that prevents an endangered species from recovering (16 USC 1532, 50 CFR 17.3). Federal agencies that propose, fund, or must issue a permit for a project that may affect a listed species or critical habitat are required to consult with the USFWS under Section 7 of the Federal Endangered Species Act. If it is determined that a federally listed species or critical habitat may be adversely affected by the federal action, the USFWS will issue a "Biological Opinion" to the federal agency that describes minimization and avoidance measures that must be implemented as part of the federal action. Projects that do not have a federal nexus must apply for a take permit under Section 10 of the Act. Section 10 of the Act requires that the project applicant prepare a habitat conservation plan as part of the permit application (16 USC 1539)."[10]

"Under Section 4 of the Federal Endangered Species Act, a species can be removed, or delisted, from the list of threatened and endangered species. Delisting is a formal action made by the USFWS and is the result of a determined successful recovery of a species. This action requires posts in the federal registry and a public comment period before a final determination is made by the USFWS."[11]

Habitat Conservation Plans

"Habitat Conservation Plans (HCPs) are required for a non-federal entity that has requested a take

[10] Tulare County 2030 General Plan RDEIR. Page 3.11-1.
[11] Ibid.

permit of a federal listed species or critical habitat under Section 10 of the Endangered Species Act. HCPs are designed to offset harmful effects of a proposed project on federally listed species. These plans are utilized to achieve long-term biological and regulatory goals. Implementation of HCPs allows development and projects to occur while providing conservation measures that protect federally listed species or their critical habitat and offset the incidental take of a proposed project. HCPs substantially reduce the burden of the Endangered Species Act on small landowners by providing efficient mechanisms for compliance with the ESA, thereby distributing the economic and logistic effects of compliance. A broad range of landowner activities can be legally protected under these plans (County of Tulare, 2010 Background Report, pages 9-6 and 9-7, 2010a). There are generally two types of HCPs, project-specific HCPs which typically protect a few species and have a short duration and multi-species HCPs which typically cover the development of a larger area and have a longer duration."[12]

There are two habitat conservation plans that apply in Tulare County: The Kern Water Habitat Conservation Plan, which applies to an area in Allensworth; and the U.S. Fish and Wildlife's "The Recovery Plan for Upland Species in the San Joaquin Valley," which includes sensitive species in the San Joaquin Valley, several of which may be found in Tulare County.

Migratory Bird Treaty and Bald and Golden Eagle Protection Act

"The Migratory Bird Treaty Act (MBTA, 16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668) protect certain species of birds from direct "take". The MBTA protects migrant bird species from take by setting hunting limits and seasons and protecting occupied nests and eggs. The Bald and Golden Eagle Protection Act (16 USC Sections 668-668d) prohibits the take or commerce of any part of Bald and Golden Eagles. The USFWS administers both acts, and reviews federal agency actions that may affect species protected by the acts."[13]

Clean Water Act - Section 404

"Wetlands and other waters of the U.S. are subject to the jurisdiction of the U.S. Army Corp of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) under Section 404 of the Clean Water Act (33 U.S.C. 1251 et seq., 1972). Together, the EPA and the USACE determine whether they have jurisdiction over the non-navigable tributaries that are not relatively permanent based on a fact-specific analysis to determine if there is a significant nexus. These non-navigable tributaries include wetlands adjacent to non-navigable tributaries that are not relatively permanent and wetlands adjacent to but that does not directly abut a relatively permanent non-navigable tributary."[14]

"Wet areas that are not regulated by this Act do not have a hydrologic link to other waters of the U.S., either through surface or subsurface flow and include ditches that drain uplands, swales or other erosional features. The USACE has the authority to issue a permit for any discharge, fill, or

[12] Op. Cit. 3.11-2.
[13] Op. Cit.
[14] Op. Cit. 3.11-1 and 3.11-2.

dredge of wetlands on a case-by-case basis, or by a general permit. General permits are handled through a Nationwide Permit (NWP) process. These permits allow specific activities that generally create minimal environmental effects. Projects that qualify under the NWP program must fulfill several general and specific conditions under each applicable NWP. If a proposed project cannot meet the conditions of each applicable NWP, an individual permit would likely be required from the USACE."[15]

State Agencies & Regulations

California Department of Fish and Wildlife (formerly Department of Fish and Game)

The California Department of Fish and Wildlife (DFW) regulates the modification of the bed, bank, or channel of a waterway under Sections 1601-1607 of the California Fish and Game Code. Also included are modifications that divert, obstruct, or change the natural flow of a waterway. Any party who proposes an activity that may modify a feature regulated by the Fish and Game Code must notify DFW before project construction. DFW will then decide whether to enter into a Streambed Alteration Agreement with the project applicant either under Section 1601 (for public entities) or Section 1603 (for private entities) of the Fish and Game Code.

California Endangered Species Act

DFW administers the California Endangered Species Act of 1984 (Fish and Game Code Section 2080), which regulates the listing and "take" of endangered and threatened State-listed species. A "take" may be permitted by California Department of Fish and Game through implementing a management agreement. "Take" is defined by the California Endangered Species Act as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" a State-listed species (Fish and Game Code Sec. 86). Under State laws, DFW is empowered to review projects for their potential impacts to State-listed species and their habitats.

The DFW maintains lists for Candidate-Endangered Species (SCE) and Candidate-Threatened Species (SCT). California candidate species are afforded the same level of protection as State-listed species. California also designates Species of Special Concern (SSC) that are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future. The CSC list is intended by DFW as a management tool for consideration in future land use decisions (Fish and Game Code Section 2080).[16]

All State lead agencies must consult with DFW under the California Endangered Species Act when a proposed project may affect State-listed species. DFW would determine if a project under review would jeopardize or result in taking of a State-listed species, or destroy or adversely modify its essential habitat, also known as a "jeopardy finding" (Fish and Game Code

[15] Op. Cit.
[16] General Plan Background Report. Pages 9-7 and 9-8.

Sec. 2090). For projects where DFW has made a jeopardy finding, DFW must specify reasonable and prudent alternatives to the proposed project to the State lead agency (Fish and Game Code Sec. 2090 et seq.).[17]

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act allows a process for developing natural community conservation plans (NCCPs) under DFW direction. NCCPs allow for regional protection of wildlife diversity, while allowing compatible development. DFW may permit takings of State-listed species whose conservation and management are provided in a NCCP, once a NCCP is prepared (Fish and Game Code Secs. 2800 et seq.).[18]

Federally and State-Protected Lands

Ownership of California's wildlands is divided primarily between federal, state, and private entities. State-owned land is managed under the leadership of the Departments of Fish and Game (DFW), Parks and Recreation, and Forestry and Fire Protection (CDF). Tulare County has protected lands in the form of wildlife refuges, national parks, and other lands that have large limitations on appropriate land uses. Some areas are created to protect special status species and their ecosystems.[19]

California Wetlands Conservation Policy

The California Wetlands Conservation Policy's goal is to establish a policy framework and strategy that will ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California. Additionally, the policy aims to reduce procedural complexity in the administration of State and federal wetlands conservation programs and to encourage partnerships with a primary focus on landowner incentive programs and cooperative planning efforts. These objectives are achieved through three policy means: statewide policy initiatives, three geographically based regional strategies in which wetland programs can be implemented, and creation of interagency wetlands task force to direct and coordinate administration and implementation of the policy. Leading agencies include the Resources Agency and the California Environmental Protection Agency (Cal/EPA) in cooperation with Business, Transportation and Housing Agency, Department of Flood and Agriculture, Trade and Commerce Agency, Governor's Office of Planning and Research, Department of Fish and Game, Department of Water Resources, and the State Water Resources Control Board.[20]

Birds of Prey

Birds of Prey are protected under the California Fish and Game Code Section 3503.5, which

[17] Ibid. 9-8.
[18] Op. Cit.
[19] Op. Cit. 9-9.
[20] Op. Cit.

states:

> *"It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."*

This includes any construction disturbance which could lead to nest abandonment, which is considered a "taking" by the DFW.

CEQA and Oak Woodland Protection

CEQA Statute Section 21083.4, "Counties; Conversion of Oak Woodlands; Mitigation Alternatives," requires that counties determine whether a development will have potential impacts on oak woodlands:

> 21083.4(a): "For purposes of this section, "oak" means a native tree species in the genus Quercus, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height."
>
> 21083.4(b): "…a county shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the…[listed] oak woodlands mitigation alternatives…"

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to Projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-1.1 Protection of Rare and Endangered Species - The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.

ERM-1.2 Development in Environmentally Sensitive Areas - The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.4 Protect Riparian Areas - The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans - The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.

ERM-1.6 Management of Wetlands - The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

ERM-1.7 Planting of Native Vegetation - The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

ERM-1.12 Management of Oak Woodland Communities - The County shall support the conservation and management of oak woodland communities and their habitats.

ERM-1.14 Mitigation and Conservation Banking Program - The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, Federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process.

ERM-1.16 Cooperate with Wildlife Agencies - The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

ERM-1.17 Conservation Plan Coordination - The County shall coordinate with local, State, and federal habitat conservation planning efforts (including Section 10 Habitat Conservation Plan) to protect critical habitat areas that support endangered species and other special-status species.

ERM-2.7 Minimize Adverse Impacts - The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

IMPACT EVALUATION

Would the Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As noted earlier, consultants Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the proposed Planning Area of the Cutler-Orosi Community Plan Update in the outskirts of Cutler-Orosi and evaluated likely impacts to such resources resulting from development within the Planning Area. As noted earlier, Habitats/land uses identified within the planning area include orchard/vineyard, urban, agricultural field, grassland/pasture, rural developed, ruderal, artificial pond/basin, and waterway. A mosaic of agricultural and urban land uses surrounding the planning area, within a region dominated by similar land uses. The planning area contains an engineered, leveed segment of Sand Creek and portions of Tout Ditch, Bump and Edmiston Ditch, and Bowhay Ditch. As indicated in Figures 4a and 4b of the Biological Evaluation (see Appendix "B" of this DEIR), no special status species are located within the Planning Area.

According to the CNDDB search (and as seen in **Table 3.4-1**), 17 Special Status plant species and 19 Special Status animal species are known to occur in the general proposed Project vicinity. As noted in the BE, "Because of many decades of disturbance, habitat for all but the Sanford's arrowhead is absent from the planning area. Potential project impacts to the Sanford's arrowhead have been considered previously (see Section 3.3.1) and are not readdressed in this section. Future development of the planning area would not affect individuals or populations of the remaining 16 special status plant species, and impacts are considered less than significant under CEQA."[21] Field surveys were conducted by LOA in April of 2021 and it was determined that of the 19 Special Status animals, there was a potential of 9 species to occur in the area. Of the remaining 10 special status species, "These species are not at risk of injury or mortality from future development activities within the planning area because of the extreme unlikelihood of their occurring within the planning area. Similarly, future development of the planning area will not result in loss of habitat for these species, because there is little or no likelihood that they utilize habitats of the planning area."[22]

As indicated in the Biological Evaluation (BE); construction-related activities could result in impacts to Sanford's Arrowhead (plant species), Western Pond Turtle, Swainson's hawk, Burrowing Owl, Migratory Birds and Raptors (including Tricolored Blackbird, White-tailed Kite, and Loggerhead Shrike), Pallid and other roosting bats, and riparian habitat; as such, **Mitigation Measures 3.4-1** through **3.4-7** have been incorporated to minimize/avoid impacts to these resources.

[21] *"Cutler-Orosi Community Plan Update Biological Evaluation Tulare County, California."* May 2021. Page 50. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of the Draft EIR.
[22] Ibid. 50.

Regarding Sanford's arrowhead, the BE notes, "This species may occur in the planning area's earthen canals and ditches. Future projects that impact these habitats may eliminate an as-yet-unknown population of this sensitive plant species, which would be considered a significant impact under CEQA."[23] Mitigation measures recommended by LOA for this special status plan are shown in the mitigation measures discussion, below.

Regarding Western pond turtle, the BE notes, "This species may occur in inundated waterways in both urban and rural portions of the planning area. Within the rural zone, it also has the potential to occur in inundated basins. Projects that will directly impact these habitats have the potential to result in injury or mortality of western pond turtle individuals, which would be considered a significant impact under CEQA."[24] Consultant LOA provided recommended mitigation measures for projects that will directly impact inundated canals or ditches (see "Waterway" on Figure 3 of the BE) or inundated basins (see "Artificial Pond/Basin" in Figure 3 of the BE) in either the urban or rural zone as shown in the mitigation measures discussion, below.

Regarding Swainson's hawk, the BE notes, "This species has the potential to nest in mature trees in the rural zone, and to forage in the rural zone's agricultural fields and grassland/pasture habitats. Future construction activities that will remove mature trees in the rural zone have the potential to directly impact Swainson's hawk nests, in which case eggs or nestlings may be destroyed. Future construction activities that will occur in close proximity to mature trees in the rural zone have the potential to disturb nesting Swainson's hawks such that they would abandon their nests. Construction-related mortality/disturbance of nesting Swainson's hawks would be considered a significant impact under CEQA.

Should one or more Swainson's hawk pairs establish nests within the planning area or adjacent lands, then nesting individuals may be sensitive to the loss of foraging habitat in the planning area. Dominated as the planning area is by orchard/vineyard uses and urban lands, the sparse distribution of agricultural fields and grassland/pasture habitat in the rural zone would be uniquely valuable to any Swainson's hawks nesting nearby, and the loss of these lands may adversely affect individuals of this species. This would be considered a significant impact under CEQA.

Swainson's hawks are not expected to occur in the planning area's urban zone. Impacts to the Swainson's hawk associated with future projects in the urban zone are considered less than significant under CEQA."[25] Mitigation measures for future projects in the planning area's rural zone, as recommended by LOA, are shown in the mitigation measures discussion, below.

Regarding Burrowing Owl, the BE notes, "As discussed in Section 2.5.4, burrowing owls have the potential to nest and roost in grassland and ruderal habitat of the rural zone, and to

[23] Op. Cit. 42.
[24] Op. Cit.
[25] Op. Cit. 44-45.

forage in the rural zone's grasslands and agricultural fields. If burrowing owls are nesting or roosting on site at the time of future construction activities, they could be at risk of construction-related injury or mortality. Such individuals may also be adversely affected from loss of habitat because, with all portions of the planning area subject to development under the 2020 Cutler-Orosi Community Plan, it cannot be assumed that displaced owls would simply move to intact adjacent habitat. Project-related burrowing owl mortality and loss of occupied burrowing owl habitat would both be considered significant impacts under CEQA. Project-related mortality of burrowing owls would also violate state and federal law. Burrowing owls are not expected to occur in the planning area's urban areas. Impacts to the burrowing owl associated with future projects in the urban zone are considered less than significant under CEQA."[26] Mitigation measures, as recommended by LOA, for future projects in ruderal habitat (see "Ruderal" on Figure 3 in the BE) or grassland/pasture habitat (see "Grassland/Pasture" on Figure 3 in the BE) in the rural zone of the planning area are shown in the mitigation measures discussion, below.

In regard to Project-Related mortality/disturbance of nest raptor and migratory birds; "Both the urban and rural zones of the planning area contain habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. For example, orchards may be used by common tree-nesting species such as the American robin and mourning dove. Mature trees in the rural zone may be used by red-tailed hawks and other tree-nesting raptors. The western meadowlark may nest on the ground in grassland habitats of the rural zone, and the disturbance-tolerant killdeer may nest in ruderal areas of either zone. Other likely urban zone nesters include the house finch, which often nests on or around buildings, and the northern mockingbird, common in residential neighborhoods.

Certain habitats of the rural zone have the potential to be used for nesting by special status avian species including the tricolored blackbird, white-tailed kite, and loggerhead shrike. Tricolored blackbirds may nest in the planning area's agricultural fields when planted to a suitable substrate such as wheat or triticale. White-tailed kites may nest in mature trees associated with the planning area's rural developed lands, or found along ruderal roadsides. Loggerhead shrikes may nest in trees or shrubs throughout the rural zone.

Any raptors and migratory birds that are nesting within or near work areas at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project-related injury or mortality of nesting raptors and migratory birds would violate state and federal laws, and is considered a potentially significant impact under CEQA."[27] Mitigation measures for nest raptor and migratory birds, as recommended by LOA, are shown in the mitigation measures discussion, below.

[26] Op. Cit. 45-46.
[27] Op. Cit. 47-48.

In regard to Project-Related mortality of Pallid or other roosting bats, the BE indicates that; "The planning area's rural zone contains buildings, bridges, and large trees suitable for roosting by a variety of native bat species including the pallid bat (Antrozous pallidus), a California Species of Special Concern. Buildings, bridges, and large trees of the urban zone, while unlikely to be used by the pallid bat (Avila-Flores and Fenton 2005, Miner and Stokes 2005), may be used for roosting by common species such as the big brown bat (Eptesicus fuscus) and Brazilian free-tailed bat (Tadarida brasiliensis). Future projects that remove buildings, bridges, or large trees have the potential to impact any bats roosting within. If bat maternity colonies are present, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA."[28]

In regard to Project-Related impacts to riparian habitat, "As discussed, where Sand Creek passes through west Cutler, it supports localized stands of sandbar willow and Fremont cottonwood. This habitat has been degraded by channel maintenance activities and urban influences, and is not considered a sensitive natural community. However, where native riparian trees remain in the Central Valley, they play an important role in conserving California's flora and fauna, many species of which are only found in riparian systems. Project-related loss of native riparian trees would contribute to the decline of riparian forests in the Central Valley and be considered a significant impact under CEQA."[29] Mitigation measures for any future projects that will impact riparian vegetation along Sand Creek, as recommended by LOA, are shown in the mitigation measures discussion, below.

Based on this analysis, implementation of **Mitigation Measures 3.4-1** through **3.4-7** would reduce potential Project-specific impacts related to this Checklist Item to ***Less Than Significant*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As the proposed Project does not result in significant loss of habitat or direct impact to these special status species, a ***Less Than Significant Cumulative Impact*** will occur through the Year 2030 Planning horizon. Consultants LOA recommended the following Mitigation Measures as contained in the Biological Evaluation (See Appendix "B" of this

[28] Op. Cit. 48-49.
[29] Op. Cit. 49-50.

DEIR). For easier reading, the Mitigation Measures contained in the Biological Evaluation have been sequenced differently and numbered rather than using the format contained in the Biological Evaluation.

Mitigation Measure(s): ***See below.***

Construction-related Impacts to Sanford's Arrowhead

3.4-1.a "(Preconstruction Surveys). Prior to construction activities in the planning area's canals and ditches, a qualified biologist will conduct a preconstruction survey for the Sanford's arrowhead during the May-October blooming period for this species."[30]

3.4-1.b "(Avoidance). If a Sanford's arrowhead population is identified within the construction zone, it will be avoided by a minimum distance of 50 feet if possible. The avoidance area will be identified on the ground with construction fencing, brightly-colored flagging, or other easily visible means."[31]

3.4-1.c. "(Salvage). If it is not possible to avoid populations of Sanford's arrowhead identified within construction zones, a qualified biologist will remove all individual plants to be impacted and relocate them to a suitable portion of the waterway that is nearby but will not be impacted."[32]

Construction-Related Mortality of the Western Pond Turtle

3.4-2. "(Preconstruction Surveys). Preconstruction surveys for western pond turtles must be conducted within 24 hours prior to the start of construction activities in inundated canals, ditches, and basins in the planning area. These surveys will encompass all aquatic habitat and surrounding uplands within 100 feet that are proposed for impact. Any turtles that are discovered during the preconstruction surveys will be relocated to similar habitat outside of the impact area."[33]

Project-related Impacts to Swainson's Hawk

3.4-3.a "(Temporal Avoidance). In order to avoid impacts to nesting Swainson's hawks, construction activities in the rural zone will occur, where possible, outside the nesting season, typically defined as March 1-September 15."[34]

3.4-3.b "(Preconstruction Surveys). If construction activities in the rural zone must occur between March 1 and September 15, a qualified biologist will conduct preconstruction nest surveys for Swainson's hawks on and within ½ mile of the work

[30] Op. Cit. 42.
[31] Op. Cit.
[32] Op. Cit.
[33] Op. Cit.
[34] Op. Cit. 44.

area within 30 days prior to the start of construction. The survey will consist of inspecting all accessible, suitable trees of the survey area for the presence of nests and hawks."[35]

3.4-3.c "(Avoidance of Active Nests). Should any active Swainson's hawk nests be discovered within the survey area, the observation will be submitted to the CNDDB, and an appropriate disturbance-free buffer will be established around the nest based on local conditions and agency guidelines. Disturbance-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until a qualified biologist has determined that the young have fledged and are capable of foraging independently."[36]

3.4-3.d "(Compensatory Mitigation). Projects in the rural zone that will remove agricultural fields or grassland within ½ mile of a documented Swainson's hawk nest (based on concurrent Mitigation Measure 3.3.3b surveys, if applicable, and/or on a CNDDB query) will provide compensatory mitigation at a 1:1 ratio for the loss of potential Swainson's hawk foraging habitat. Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the vicinity, to be preserved in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved Swainson's hawk conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2."[37]

Project-Related Mortality of Burrowing Owl

3.4-4.a "(Pre-construction Surveys). A pre-construction "take avoidance" survey for burrowing owls will be conducted by a qualified biologist within 30 prior to the start of construction according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The survey area will include all suitable habitat on and within 200 meters of the construction zone, where accessible."[38]

3.4-4.b "(Avoidance of Active Nests). If construction activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near the construction zone, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged

[35] Op. Cit.
[36] Op. Cit. 45.
[37] Op. Cit.
[38] Op. Cit. 46.

with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below."[39]

3.4-4.c "(Avoidance or Passive Relocation of Resident Owls). During the non-breeding season (September 1-January 31), resident owls occupying burrows in the construction zone may either be avoided, or passively relocated to alternative habitat. If the project applicant chooses to avoid active owl burrows within the construction zone during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing and will remain in place until a qualified biologist determines that the burrows are no longer active. If the project applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist."[40]

3.4-4.d "(Compensatory Mitigation). The project applicant will provide compensatory mitigation, at a 1:1 ratio, for all potential burrowing owl habitat removed within 600 meters of active burrowing owl burrows, as identified during the preconstruction surveys provided for in Mitigation Measure 3.3.4b. Potential burrowing owl habitat in the planning area generally includes agricultural fields (suitable for foraging), ruderal habitat (suitable for nesting), and non-native grassland habitat (suitable for nesting or foraging). Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the project vicinity, to be preserved in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved burrowing owl conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2."[41]

Construction-Related Mortality of Nesting Raptors and Migratory Birds (Including Tricolored Blackbird, Loggerhead Shrike, and White-tailed Kite)

3.4-5.a "(Avoidance). In order to avoid impacts to nesting raptors and migratory birds, individual projects within the planning area will be constructed, where possible, outside the nesting season, or between September 1st and January 31st."[42]

3.4-5.b "(Preconstruction Surveys). If construction must occur between February 1-August 31, a qualified biologist will conduct preconstruction surveys for active migratory bird nests within 14 days prior to the start of work. For projects within the urban zone, the survey area will encompass the work area and accessible surrounding lands

[39] Op. Cit.
[40] Op. Cit.
[41] Op. Cit. 46-47.
[42] Op. Cit. 48.

within 100 feet. For projects within the rural zone, the survey area will encompass the work area and accessible surrounding lands within 300 feet."[43]

3.4-5.c "(Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged."[44]

Construction-Related Mortality of Roosting Bats

3.4-6.a "(Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings, bridges, and large trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse."[45]

3.4-6.b "(Preconstruction Surveys). If removal of buildings, bridges, or large trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed."[46]

3.4-6.c. "(Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities."[47]

3.4-6.d "(Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active."[48]

Project-Related Impacts to Riparian Habitat

3.4-7.a "(Tree Survey). Prior to project construction, a qualified biologist will survey all areas of riparian vegetation to be impacted, and will record the species, location, and

[43] Op. Cit.
[44] Op. Cit.
[45] Op. Cit. 49.
[46] Op. Cit.
[47] Op. Cit.
[48] Op. Cit.

diameter at breast height (DBH) of each native tree. Upon project completion, a qualified biologist will survey the site to determine if any surveyed trees were removed."[49]

3.4-7.b "(Revegetation). The project applicant will provide compensation for removal of any native riparian trees. Replacement plantings will be installed at a ratio of 3:1 for trees with a DBH between 4 and 24 inches, and at a ratio of 10:1 for trees with a DBH greater than 24 inches. A revegetation plan will be prepared for the project that will prescribe methods for planting, irrigating, and maintaining the replacement trees and identify the success criteria for the revegetation effort."[50]

Conclusion: ***Less Than Significant Impact With Mitigation***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist item will occur through the Year 2030 Planning horizon.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Project Impact Analysis: ***Less Than Significant Impact***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. LOA noted in the Biological Evaluation that "As discussed, sensitive natural communities and designated critical habitat are absent from the planning area. All of the planning area's vegetation associations are highly modified, and most are dominated by non-native species. The nearest units of critical habitat are located 1.8 miles southeast, 2.8 miles southwest, and 5.18 miles southwest of the planning area. Future development of the planning area does not have the potential to impact sensitive natural communities or units of critical habitat."[51] As such, the Project would result in a ***Less Than Significant Impact*** through the Year 2030 Planning horizon

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley; and therefore, cumulative impacts will extend beyond Tulare County political boundaries.

[49] Op. Cit. 50.
[50] Op. Cit. 50.
[51] Op. Cit. 54.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As the proposed Project does not result in significant loss of habitat or direct impact to these special status species, a ***Less Than Significant Cumulative Impact*** will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. LOA noted in the Biological Evaluation that; "As discussed in Sections 2.3.8, the hydrologic features in the planning area include an approximately 2.9-mile reach of Sand Creek, an approximate 1.4-mile reach of Tout Ditch, an approximately 0.37-mile reach of Bump and Edmiston Ditch, and an approximately 0.25-mile reach of Bowhay Ditch. Under the Navigable Waters Protection Rule, it appears none of these features meet the definition of Waters of the U.S.; however, Sand Creek is likely to fall under the jurisdiction of CDFW, and any of the planning area's waterways or artificial ponds/basins may be regulated by the RWQCB."[52]

LOA also noted in the BE, "Future project-related impacts to the planning area's waterways and artificial ponds/basins, should they occur, would not be considered significant under CEQA. The three irrigation ditches and all of the ponds/basins were human-constructed, do not replace natural drainages or wetlands, are highly maintained for ongoing anthropogenic use, and do not appear to offer unique value to locally-occurring flora and fauna. Although the engineered channel of Sand Creek does replace a natural drainage, it is highly maintained and supports minimal riparian vegetation, limited to a few stands in the southwestern portion of the planning area. As such, modification or fill of these features would not substantially adversely affect the environment. However, project applicants would need to work with the RWQCB to determine whether Waste Discharge Requirements or other

[52] Op. Cit. 53.

permits/authorizations were required, and in the case of Sand Creek, would need to submit a Notification of Lake or Streambed Alteration to CDFW.

Removal of riparian trees along Sand Creek, if it occurs, would constitute a significant impact under CEQA and was addressed and mitigated in Section 3.3.7 [of the BE] above."[53]

Based on this analysis, implementation of **Mitigation Measures 3.4-7.a** and **3.4-7.b** would reduce potential Project-specific impacts related to this Checklist Item to ***Less Than Significant*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As the proposed Project does not result in significant impacts to potential waters of the U.S., a ***Less Than Significant Cumulative Impact With Mitigation*** will occur through the Year 2030 Planning horizon. LOA recommended the following Mitigation Measures as contained in the Biological Evaluation (See Appendix "B" of this DEIR). For easier reading, the Mitigation Measures contained in the Biological Evaluation have been sequenced differently and numbered rather than using the format contained in the Biological Evaluation.

Mitigation Measure(s): **See Mitigation Measures 3.4-7.a** and **3.4-7.b**

Conclusion: ***Less Than Significant Impact With Mitigation***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist item will occur with mitigation. The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not result in significant loss of habitat or direct impact to jurisdictional waters, a ***Less Than Significant Cumulative Impact*** through the Year 2030 Planning horizon will occur.

[53] Op. Cit. 53-54.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. LOA noted in the BE that, "As discussed, Sand Creek is a wide, somewhat naturalized corridor that traverses the highly disturbed matrix of the planning area, offering a relatively secure conduit for wildlife movement. Any future projects that are implemented along Sand Creek would have the potential to temporarily disrupt or redirect the movements of wildlife that could otherwise use this corridor; however, it is anticipated that after project completion, normal movements would resume. Birds using the Pacific flyway will continue to do so during and following future project development. Future development of the planning area will result in a less than significant effect on wildlife movement corridors.[54] "No mitigation is warranted."[55] As such, a ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, corridors for fish and wildlife species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts will extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As the proposed Project does not impact important movement corridors, a ***Less Than Significant Cumulative Impact*** through the Year 2030 Planning horizon will occur.

Mitigation Measure(s) ***None Required.***

Conclusion: ***Less Than Significant Impact***

[54] Op. Cit. 54.
[55] Op. Cit.

As noted earlier, ***No Project-specific and Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As the proposed Project does not result in significant loss of habitat or direct impact to jurisdictional waters. No trees will be removed as a result of the proposed Project. As noted in the Biological Evaluation, As discussed, sensitive natural communities and designated critical habitat are absent from the planning area. All of the planning area's vegetation associations are highly modified, and most are dominated by non-native species. The nearest units of critical habitat are located 1.8 miles southeast, 2.8 miles southwest, and 5.18 miles southwest of the planning area. Future development of the planning area does not have the potential to impact sensitive natural communities or units of critical habitat."[56] "No mitigation is warranted."[57] A ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is California. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County 2030 General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

There are less than significant impacts to biological resources, and, therefore, there are no conflicting policies. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. A ***Less Than Significant Cumulative Impact*** related to this Checklist Item through the Year 2030 will occur.

Mitigation Measure(s): ***None Required.***

[56] Op. Cit.
[57] Op. Cit. 51.

Conclusion: ***Less Than Significant Impact***

Less Than Significant Project-specific and Cumulative Impacts related to this Checklist Item through the Year 2030 will occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As noted in the BE, "Individual projects will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs [Habitat Conservation Plans] or NCCPs [Natural Community Conservation Plan] are in effect for the area. Therefore, the projects are not expected to conflict with local policies or habitat conservation plans."[58] "No mitigation is warranted."[59] A ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is California. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

With less than significant Program-specific impacts related to habitat conservation plans, a ***Less Than Significant Cumulative Impact*** through the Year 2030 will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

Less Than Significant Program-specific and cumulative impacts related to this Checklist Item through the Year 2030 will occur.

[58] Op. Cit. 55.
[59] Op. Cit.

DEFINITIONS AND ACRONYMS

Definitions

CEQA Guidelines Section 15380 provides definitions for the terms “species,” “endangered,” “threatened” and “rare”:

“Endangered, Rare or Threatened Species

(a) "Species" as used in this section means a species or subspecies of animal or plant or a variety of plant.

(b) A species of animal or plant is:

(1) "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or

(2) "Rare" when either:

(A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

(B) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

(c) A species of animal or plant shall be presumed to be endangered, rare or threatened, as it is listed in:

(1) Sections 670.2 or 670.5, Title 14, California Code of Regulations; or

(2) Title 50, Code of Federal Regulations Section 17.11 or 17.12 pursuant to the Federal Endangered Species Act as rare, threatened, or endangered.

(d) A species not included in any listing identified in subdivision (c) shall nevertheless be considered to be endangered, rare or threatened, if the species can be shown to meet the criteria in subdivision (b).

(e) This definition shall not include any species of the Class Insecta which is a pest whose protection under the provisions of CEQA would present an overwhelming and overriding risk to man as determined by:

(1) The Director of Food and Agriculture with regard to economic pests; or

(2) The Director of Health Services with regard to health risks."[60]

DEFINITIONS AND ACRONYMS

Acronyms

BE	Biological Evaluation
CDF	California Department of Forestry and Fire Protection
CSC	DFW Species of Special Concern
Cal/EPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
DEIR	Draft Environmental Impact Report
DFW	California Department of Fish and Wildlife
DPR	California Department of Parks and Recreation
EIR	Environmental Impact Report
HCP	Habitat Conservation Plan
LOA	Live Oak Associates, Inc. (consultant)
MBTA	Migratory Bird Treaty Act (Federal)
NCCP	Natural Communities Conservation Planning Act
NWP	Nationwide Permit
PSP	Tulare County Special Use Permit
SCE	Candidate-Endangered Species
SCT	Candidate-Threatened Species
SSC	Species of Special Concern
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Access June 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

California Department of Fish and Wildlife. California Environmental Quality Act (CEQA) Review. Accessed June 2021 at: https://wildlife.ca.gov/Conservation/Environmental-Review/CEQA.

[60] CEQA Guidelines. Section 15380.

"Cutler-Orosi Community Plan Update Biological Evaluation Tulare County, California." May 2021. Page i. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of the Draft EIR.

Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Included in Appendix "F" of this Draft EIR.

Tulare County General Plan 2030 Update. Background Report. Accessed June 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf.

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U.S. Fish & Wildlife Service. Recovery Plan for Upland Species of the San Joaquin Valley, California. 1998. Accessed June 2021 at: http://esrp.csustan.edu/publications/recoveryplan.php

Cultural Resources
Chapter 3.5

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, or Plan Update, Update) will result in a ***Less Than Significant Impact With Mitigation*** through the Year 2030 Planning horizon. As development occurs, it is possible to encounter previously unknown cultural resources. Based on this uncertainty, the project would result in a less than significant impact with mitigation to Cultural Resources through the Year 2030 Planning horizon. A California Historical Resources Information Systems search, Sacred Lands File search, and Tribal consultation requests (per AB 52) are included in Appendix "C" and are the basis for determining that this Project will result in less than significant impact with mitigation. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources. If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the Project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA[1] (Section 21084.1). The definition of "historical resources" is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. "Substantial adverse change" is defined as "physical demolition, destruction, relocation, or alteration of the resource…"

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the Project site. Provisions for the accidental discovery of historical or unique archaeological resources accidentally discovered during construction include a recommendation for evaluation by a qualified archaeologist, with follow-up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated

[1] CEQA Section 21084.1. Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC at pdf page 46.

on public lands, except with express permission of the public agency having jurisdiction over such lands."

This section of the DEIR for the Project meets CEQA requirements by addressing potential impacts to cultural resources on the proposed Project site. The "Environmental Setting" section provides a description of cultural resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" section provides a description of applicable State and local regulatory policies. Results of cultural resources reports from CHRIS are included. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant.

CEQA Thresholds of Significance

Under CEQA Guidelines Section 15064.5. (b) "A Project with an effect that may cause a substantial adverse change in the significance of an historical resource is a Project that may have a significant effect on the environment.

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a Project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the Project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a Project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's

Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

(4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.

(5) When a Project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources Code Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents."[2]

ENVIRONMENTAL SETTING

Cutler and Orosi are two unincorporated communities located in northern Tulare County. Both communities are located along State Route 63 about one half mile apart. The population for Cutler and Orosi is 5,850 and 7,760 persons in 2017. Cutler and Orosi are surrounded by agricultural lands. The current Cutler-Orosi Urban Development Boundary (UDB) area consists of approximately 2,441.9 acres (see Figure 4 in Cutler-Orosi Community Plan Update). Cutler is bisected north and south by State Route (SR) 63. SR 63 and Avenue 416 divides Orosi into four neighborhood quadrants.[3]

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[4]

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail

[2] Ibid. Section 15064.5 (b).
[3] Tulare County. Draft 2021 Cutler-Orosi Community Plan Update. Page 29.
[4] Tulare County General Plan 2030 Update. Page 8-5.

transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."[5]

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167"[6]

Existing Cultural and Historic Resources

"Tulare County's known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources."[7]

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State University Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws.

Existing Resources

Records Search Results

A records search (that is, the California Historical Resources Information Systems (CHRIS)) of site files and maps was conducted at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. According to a CHRIS research completed in October 2018, there have been 17 previous cultural resource studies conducted within the project area. There were also two recorded cultural resource within project area and one recorded resource within the one-half mile radius. These resources consist of two historic era buildings and one historic era canal.

Orosi Branch Library (resource P-54-004004), located at 12662 Avenue 416, has been given a National Register status code of 1S, indicating the individual property has been listed in the National Register of Historic Places by the keeper. It is also listed in the California Register of

[5] Ibid.
[6] Op. Cit. Page 8-6.
[7] Tulare County General Plan 2030 Update. Background Report. Page 9-56.

Historical Resources. There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. Results of the CHRIS are included in Appendix "C" of this Draft EIR.

As there are no development plans or proposal that would impact these resources during the Update process, it is unlikely that any these resources would be impacted by adoption of the Community Plan. Any future developments would be evaluated on a case-by-case basis specific to the site where a proposal may occur to ensure appropriate minimization, avoidance, or mitigation may be necessary.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on October 9, 2018, in order to determine whether Native American sacred sites have been identified either within or in close proximity to the study area. The NAHC responded in a letter dated October 18, 2018, stating that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the project study area. The NAHC notes that the absence of surface visible archaeological features does not preclude their presence below surface. The NAHC advised that when specific projects become public, that the County or appropriate jurisdiction inform the Native American contacts provided by the NAHC as to the nature of the proposed project. As part of the consultation process, the NAHC recommends that local government and project developers contact tribal governments and Native American individuals on the list provided in order to determine of the proposed action might impact any cultural places or sacred sites. NAHC also recommends that more than one written notice sent to tribes that are traditionally and culturally affiliated to a potential area of project affect (APE) during the 30-day notification period to ensure that the information has been received.

Letters and follow-up phone calls were made to tribal organizations on the NAHC contact list, to determine whether tribal cultural resources were known in or near the Project. These investigations determined that the Project area had not been previously surveyed and that no sites or tribal cultural resources were known to exist within or near it.

Planning Department Records Search

It is also noted that Planning Department records search of building permits and other types of entitlements within the PPSA by RMA staff indicates that no new projects (i.e., construction-related developments which involves new structures or any clearing or earthmoving) have occurred since the CHRIS was conducted by the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. As such, the landscape remains unchanged since the CHRIS was completed; that is, no surface or subsurface ground disturbances, demolition, or other physical changes within the Planning Area have occurred thus it is unlikely than any cultural resources have been impacted since the CHRIS was completed.

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources. The legislation established the National Register of Historic Places and the National Historic Landmarks Program. It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state. A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements federal agencies to consider the effects of proposed federal Projects on historic properties (Section 106, NHPA). Federal agencies and recipients of federal funding are required to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.[8]

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.[9]

Among OHP's responsibilities are identifying, evaluating, and registering historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.[10]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

[8] Advisory Council of Historic Preservation. National Preservation Act. Accessed July 2021 at: http://achp.gov/digital-library-section-106-landing/national-historic-preservation-act.
[9] California Office of Historic Preservation 2019. Accessed July 2021 at: http://ohp.parks.ca.gov/?page_id=1066.
[10] Ibid.

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.[11]

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

"(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;
(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

[11] California State Parks. Office of Historic Preservation. California Register: Criteria for Designation. Accessed July 2021 at: http://www.ohp.parks.ca.gov/?page_id=21238.

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1."[12]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

"(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process."[13]

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to Public Resources Code § 5097.98, which provides specific guidance on the

[12] CEQA Guidelines. Section 15064.5(a).
[13] Ibid. Section 15064.5(c).

disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

"(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.[14]

"(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

[14] Op. Cit. Section 15064.5(d).

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.[15]

"(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."[16]

Paleontological Resources

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site… or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."[17]

Tribal Consultation Requirements: SB 18 (Burton, 2004)

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. This bill amended Section 815.3 of the Civil Code, to amend Sections 65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.2 to, the Government Code, relating to traditional tribal cultural Places. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's

[15] Ibid. Section 15064.5 (e).
[16] Ibid. Section 15064.5(f).
[17] Public Resources Code 5097.5(a).

jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.[18]

Existing law establishes the NAHC and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

"The California Native American Heritage Commission (NAHC or Commission), created in statute in 1976 (Chapter 1332, Statutes of 1976), is a nine-member body whose members are appointed by the Governor. The NAHC identifies, catalogs, and protects Native American cultural resources - ancient places of special religious or social significance to Native Americans and known ancient graves and cemeteries of Native Americans on private and public lands in California. The NAHC is also charged with ensuring California Native American tribes' accessibility to ancient Native American cultural resources on public lands, overseeing the treatment and disposition of inadvertently discovered Native American human remains and burial items, and administering the California Native American Graves Protection and Repatriation Act (CalNAGPRA), among many other powers and duties."[19]

As noted earlier, the Native American Heritage Commission (NAHC) was contacted on October 9, 2018, in order to determine whether Native American sacred sites have been identified either within or in close proximity to the study area. The NAHC responded in a letter dated October 18, 2018, stating that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the project study area. Further detail is provided in Chapter 3.17 Tribal Cultural Resources for the Project location (see Appendix "C" of the DEIR).

Local Policy & Regulations

Tulare County General Plan Policies

[18] California Legislative Information, Government Code §65352.3. Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=65352.3.&lawCode=GOV.

[19] Native American Heritage Commission, About the Native American Heritage Commission. Accessed July 2021 at: http://www.nahc.ca.gov/about/

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as below.

ERM-6.1 Evaluation of Cultural and Archaeological Resources - The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

ERM-6.2 Protection of Resources with Potential State or Federal Designations - The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.9 Confidentiality of Archaeological Sites - The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

ERM-6.10 Grading Cultural Resources Sites - The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

IMPACT EVALUATION

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning

classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. According to the draft Plan Update, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

The Southern San Joaquin Valley Information Center, Bakersfield (Center) conducted a cultural resources record search. The Center records search in October 2018 identified two cultural resources within the project area, and one recorded resource within one-half mile radius. Seventeen previous cultural resource studies have been completed within portions of the project area; and no additional studies have been completed within one-half mile radius. The records search included results of known and recorded cultural resources sites, inventory and excavation reports filed with Southern San Joaquin Valley Information Center, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest.

In their search results letter, Center staff noted, "We understand this project consists of a General Plan Update for the Cutler-Orosi Community. Further, we understand no immediate ground disturbance will take place as a result of this update. Therefore, no further cultural resource investigation is recommended at this time. However, prior to any future ground disturbance project activities, we recommend a new record search be conducted so our office can then make project specific recommendations for further cultural resources study, if needed. A list of qualified consultants can be found at www.chrisinfo.org."[20] The Center staff also recommend that RMA contact the Native American Heritage Commission in Sacramento as, "They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required."[21]

As noted earlier, the Native American Heritage Commission (NAHC) was contacted on October 9, 2018. In a response letter dated October 18, 2021 (see Appendix "C"), the NAHC indicated that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the Project area.

As indicated in here and in Chapter 3.18 Tribal Cultural Resources, the proposed Plan Update will result in a less than significant impact within the Year 2030 planning horizon. However, as development occurs, it is possible to encounter previously unknown cultural,

[20] The Southern San Joaquin Valley Information Center. California State University, Bakersfield. October 23, 2018. Signed by Celest M. Thomson, Coordinator, and included in Appendix "C" of this Draft EIR.
[21] Ibid.

historical, or archaeological resources. Based upon this uncertainty, implementation of **Mitigation Measures 3.5-1** through **3.5-3** would reduce potential Project-specific impacts related to this Checklist Item to a level considered ***Less Than Significant*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project would be mitigated to a level considered less than significant, cumulative impacts would also be considered ***Less Than Significant With Mitigation*** through the Year 2030 Planning horizon.

Mitigation Measure(s):

3.5-1 In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 3.5-1**, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced to a ***Less Than Significant*** level through the Year 2030 Planning horizon.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project is an update to the Cutler-Orosi Community Plan and there are no development proposals as part of this Update, there will be no physical changes to the environment as the

Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Further, the Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

As noted in Response to Item 3.5.a), a cultural resources records search was conducted of the area. No archaeological deposits or isolated finds were identified during that search.

As indicated earlier, the proposed Plan Update will result in less than significant impact within the planning horizon (Year 2030). However, as development occurs, it is possible to encounter previously unknown cultural resources. Based upon this uncertainty. implementation of Mitigation Measure 5-1, ***Less Than Significant Impacts With Mitigation*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. The proposed Project will be mitigated to a ***Less Than Significant Project-specific and Cumulative Impact*** through the Year 2030 Planning horizon.

Mitigation Measure(s): ***See Mitigation Measure 3.5-1***

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 3.5-1**, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced to a ***Less Than Significant Impact With Mitigation*** through the Year 2030 Planning horizon.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project is an update to the Cutler-Orosi Community Plan and there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

As noted in Response to Item 3.5.a), a cultural resources records search was conducted of the site. No paleontological resources or sites, or unique geologic features were identified during that search.

Although it cannot conclusively be demonstrated that no subsurface paleontological resources are present, it is possible to mitigate potentially significant impacts with Mitigation **Measure 3.5-2**. With implementation of **Mitigation Measure 3.5-2**, Project-specific impacts related to this Checklist Item will be reduced to ***Less Than Significant Impact With Mitigation*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As such, the proposed Project would result in ***Less Than Significant Project-Specific and Cumulative Impacts With Mitigation*** through the Year 2030 Planning horizon.

Mitigation Measure(s):

3.5-2 The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the

location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 3.5-2**, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced ***Less Than Significant With Mitigation*** through the Year 2030 Planning horizon.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project is an update to the Cutler-Orosi Community Plan and there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

As noted in Response to Item 3.5.a), a cultural resources records search was conducted of the area. No development is proposed. Although it cannot conclusively be demonstrated that no subsurface human remains are present, it is possible to mitigate potentially significant impacts with the following Mitigation Measure. With implementation of **Mitigation Measure 5-3**, this Checklist Item will be reduced to a ***Less Than Significant Project-specific Impact With Mitigation*** through the Year 2030 Planning update.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

It is not anticipated that Native American remains will be found at any site. However, consistent with CEQA requirements, **Mitigation Measure 3.5-3** is included in the unlikely event that if Native American remains are unearthed during any ground disturbance activities, all work will immediately halt and the Native American Heritage Commission will be contacted to assess the findings and make appropriate mitigation recommendations. As Project-specific impacts will be mitigated to a less than significant level, Cumulative Impacts will result in a level of ***Less Than Significant Project-specific and Cumulative Impacts with Mitigation*** through the Year 2030 Planning horizon.

Mitigation Measure(s):

3.5-3 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. **There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:**
    a. **The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and**
    b. **If the coroner determines the remains to be Native American:**
        i. **The coroner shall contact the Native American Heritage Commission within 24 hours.**
        ii. **The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.**
        iii. **The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or**
2. **Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.**

a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

b. The descendant fails to make a recommendation; or

c. The landowner or his authorized representative rejects the recommendation of the descendent.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 3.5-2**, potential ***Project-specific and Cumulative Impacts*** related to this Checklist Item will be reduced ***Less Than Significant Impact With Mitigation*** through the Year 2030 Planning horizon.

DEFINITIONS/ACRONYMS

Acronyms

Center	San Joaquin Valley Historical Resource Information Center
CEQA	California Environmental Quality Act
CHRIS	California Historic Resources Information System
CRHR	California Register of Historical Resources
DEIR	Draft Environmental Impact Report
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act of 1966
OHP	California State Office of Historic Preservation
PRC	Public Resources Code
RMA	Tulare County Resource Management Agency
SHPO	State Historic Preservation Officers

REFERENCES

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Energy
Chapter 3.6

SUMMARY OF FINDINGS

Based on the impact analysis below, potential impacts to Energy as a result of the proposed Project are determined to be ***Less Than Significant*** through the Year 2030 Planning horizon. The impact determinations in this chapter are based upon information obtained from the Project Description and numerous State of California energy-related sources that are publicly and readily available. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emission of pollutants during both the production and consumption phases. Energy usage is typically quantified using the British Thermal Unit (BTU). The BTU is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit. As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 123,000 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively. Natural gas usage is expressed in therms. A therm is equal to 100,000 BTU. Energy conservation is embodied in many federal, state and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple areas. Also, as described further in this section, the Tulare County General Plan currently contains policies that promotes energy conservation and efficiency measures, energy conservation awareness, and renewable energy.

California Environmental Quality Act (CEQA) Requirements

"In 1974, the Legislature adopted the Warren-Alquist State Energy Resources Conservation and Development Act. (Pub. Resources Code, § 25000 et seq.) That act created what is now known as the California Energy Commission, and enabled it to adopt building energy standards. (See, e.g., id. at § 25402.) At that time, the Legislature found the "rapid rate of growth in demand for electric

energy is in part due to wasteful, uneconomic, inefficient, and unnecessary uses of power and a continuation of this trend will result in serious depletion or irreversible commitment of energy, land and water resources, and potential threats to the state's environmental quality." (Id. at § 25002; see also § 25007 ("It is further the policy of the state and the intent of the Legislature to employ a range of measures to reduce wasteful, uneconomical, and unnecessary uses of energy, thereby reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals"))

The same year that the Legislature adopted Warren-Alquist, it also added section 21100(b)(3) to CEQA, requiring environmental impact reports to include "measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." As explained by a court shortly after it was enacted, the "energy mitigation amendment is substantive and not procedural in nature and was enacted for the purpose of requiring the lead agencies to focus upon the energy problem in the preparation of the final EIR." (People v. County of Kern (1976) 62 Cal.App.3d 761, 774 (emphasis added)). It compels an affirmative investigation of the project's potential energy use and feasible ways to reduce that use.

Though Appendix F of the CEQA Guidelines has contained guidance on energy analysis for decades, implementation among lead agencies has not been consistent. (See, e.g., California Clean Energy Committee v. City of Woodland, supra, 225 Cal.App.4th 173, 209.) While California is a leader in energy conservation, the importance of addressing energy impacts has not diminished since 1974. On the contrary, given the need to avoid the effects of climate change, energy use is an issue that we cannot afford to ignore. As the California Energy Commission's Integrated Energy Policy Report (2016) explains:

> Energy fuels the economy, but it is also the biggest source of greenhouse gas emissions that lead to climate change. Despite California's leadership, Californians are experiencing the impacts of climate change including higher temperatures, prolonged drought, and more wildfires. There is an urgent need to reduce greenhouse gas emissions and increase the state's resiliency to climate change. With transportation accounting for about 37 percent of California's greenhouse gas emissions in 2014, transforming California's transportation system away from gasoline to zero emission and near-zero-emission vehicles is a fundamental part of the state's efforts to meet its climate goals. Energy efficiency and demand response are also key components of the state's strategy to reduce greenhouse gas emissions. (Id. at pp. 5, 8, 10.) Appendix F was revised in 2009 to clarify that analysis of energy impacts is mandatory. OPR today proposes to add a subdivision in section 15126.2 on energy impacts to further elevate the issue, and remove any question about whether such an analysis is required."[1]

Further, an "Explanation of Proposed Amendments" contained in the Proposed Update (and now adopted amendments) to the CEQA Guidelines documents stated that OPR proposed to add a new

[1] State of California. Office of Planning and Research. Proposed Update to the CEQA Guidelines. November 2017. Pages 65-66. Accessed July 2021 at: http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf

subdivision (b) to section 15126.2 which discusses the required contents of an environmental impact report. The new subdivision would specifically address the analysis of a project's potential energy impacts. This addition is necessary for several reasons explained as follows. [2]

> "The first sentence clarifies that an EIR must analyze whether a project will result in significant environmental effects due to "wasteful, inefficient, or unnecessary consumption of energy." This clarification is necessary to implement Public Resources Code section 21100(b)(3). Since the duty to impose mitigation measures arises when a lead agency determines that the project may have a significant effect, section 21100(b)(3) necessarily requires both analysis and a determination of significance in addition to energy efficiency measures. (Pub. Resources Code, § 21002.)
>
> The second sentence further clarifies that all aspects of the project must be considered in the analysis. This clarification is consistent with the rule that lead agencies must consider the "whole of the project" in considering impacts. It is also necessary to ensure that lead agencies consider issues beyond just building design. (See, e.g., California Clean Energy Com. v. City of Woodland, supra, 225 Cal.App.4th at pp. 210-212.) The analysis of vehicle miles traveled provided in proposed section 15064.3 (implementing Public Resources Code section 21099 (SB 743)) on transportation impacts may be relevant to this analysis.
>
> The third sentence signals that the analysis of energy impacts may need to extend beyond building code compliance. (Ibid.) The requirement to determine whether a project's use of energy is "wasteful, inefficient, and unnecessary" compels consideration of the project in its context. (Pub. Resources Code, § 21100(b)(3).) While building code compliance is a relevant factor, the generalized rules in the building code will not necessarily indicate whether a particular project's energy use could be improved. (Tracy First v. City of Tracy (2009) 177 Cal.App.4th 912, 933 (after analysis, lead agency concludes that project proposed to be at least 25% more energy efficient than the building code requires would have a less than significant impact); see also CEQA Guidelines, Appendix F, § II.C.4 (describing building code compliance as one of several different considerations in determining the significance of a project's energy impacts).) That the Legislature added the energy analysis requirement in CEQA at the same time that it created an Energy Commission authorized to impose building energy standards indicates that compliance with the building code is a necessary but not exclusive means of satisfying CEQA's independent requirement to analyze energy impacts broadly.
>
> The new proposed [now adopted] subdivision (b) also provides a cross-reference to Appendix F. This cross-reference is necessary to direct lead agencies to the more detailed provisions contained in that appendix. Finally, new proposed subdivision (b) cautions that the analysis of energy impacts is subject to the rule of reason, and must focus on energy demand actually caused by the project. This sentence is necessary to place reasonable limits on the analysis. Specifically, it signals that a full "lifecycle" analysis that would account

[2] Ibid. 66.

for energy used in building materials and consumer products will generally not be required. (See also Cal. Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 (Dec. 2009) at pp. 71-72.)"[3]

Specifically, Section 15121.6 added new sub-section (b), to wit: "(b) Energy Impacts. If the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy, the EIR shall analyze and mitigate that energy use. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project. (Guidance on information that may be included in such an analysis is presented in Appendix F.) This analysis is subject to the rule of reason and shall focus on energy demand that is caused by the project. This analysis may be included in related analyses of air quality, greenhouse gas emissions or utilities in the discretion of the lead agency."[4]

CEQA Thresholds of Significance

- Result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy.
- The project's energy use for all project phases and components, including transportation-related energy, during construction and operation.
- The project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project.
- Analysis is subject to the rule of reason and shall focus on energy demand that is caused by the project.

ENVIRONMENTAL SETTING

Natural Gas and Electric Service

"Southern California Edison provides electric service to the majority of Tulare County, including the majority of the San Joaquin Valley and the foothills. Natural gas service is primarily provided by The Gas Company (formerly Southern California Gas Company). Pacific Gas & Electric also serves northern Tulare County's electric needs on limited basis. The electrical facilities network includes both overhead and underground lines, with new development required to install

[3] Op. Cit. 66-67.
[4] Op. Cit. 67-68.

underground service lines. All utility providers indicate that additional service should be available to new development, depending on the necessary load of the services requested."[5]

Existing Energy Consumption

Electrical and natural gas services for the Project area are provided by Pacific Gas and Electric Company (PG&E). In 2019, PG&E provided 104,854.460407 GWh of electricity and 4942.089326 million therms of natural gas within its entire service area; which includes the northern areas of Tulare County. In 2019, Tulare County consumed 4162.198178 gigawatt-hours (GWh) of electricity and 155.379677 million therms of natural gas (see **Table 3.6-1**).

Table 3.6-1
2019 County and State Energy Demands on Energy Providers
Pacific Gas and Electric Company (PG&/E)

Demand by:	Electricity (in MWh)[6]	Gas (in Therms)[7]
Tulare County	[1]4,162,198.178	[2]157,379,677
PG&E Service Area	[1]104,854,460.407	[2]4,942,089,326

Notes: 1 Converted to MWh as CEC Energy Reports expresses in Millions of kWh (GWh).
2 Converted to MWh as CEC Energy Reports expresses in Millions of Therms.

REGULATORY SETTING

Federal Agencies & Regulations

Energy Policy Act of 2005

The Energy Policy Act of 2005[8] seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can obtain federal tax credits for purchasing fuel efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

[5] Tulare County General Plan 2030 Update. Recirculated Draft EIR. 3.4 Energy and Global Climate Change. February 2010. Page 3.4-14. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf

[6] California Energy Commission. California Energy Consumption Database. Electricity Consumption by County and Plan Area. Energy reports accessed July 2021 at: http://ecdms.energy.ca.gov/elecbycounty.aspx and http://ecdms.energy.ca.gov/elecbyplan.aspx

[7] Ibid. Gas Consumption by County and Plan Area. Energy reports accessed July 2021 at: http://ecdms.energy.ca.gov/gasbycounty.aspx and http://ecdms.energy.ca.gov/gasbyplan.aspx

[8] Energy Policy Act of 2005. H.R. 6, Public Law No. 109-58. Accessed July 2021 at: https://www.congress.gov/bill/109th-congress/house-bill/6 and https://www.govinfo.gov/content/pkg/BILLS-109hr6enr/pdf/BILLS-109hr6enr.pdf.

State Agencies & Regulations

California Energy Commission[9]

The California Energy Commission (CEC) was created in 1975 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy. The CEC's research, programs and policies remain crucial today as the state plans for 100% clean energy and carbon neutrality by mid-century.

California 2008 Energy Action Plan Update[10]

The 2008 update to the 2005 Energy Action Plan II is the State's principal energy planning and policy document. The updated document examines the state's ongoing actions in the context of global climate change. The 2005 Energy Action Plan II continues the goals of the original 2003 Energy Action Plan, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy resources are adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first-priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy demand and transmission capacity needs, clean and efficient fossil-fired generation is supported. The California 2008 Energy Action Plan Update examines policy changes in the areas of energy efficiency, demand response, renewable energy, electricity reliability and infrastructure, electricity market structure, natural gas supply and infrastructure, research and development, and climate change.

2019 California Energy Efficiency Action Plan[11]

The 2019 California Energy Efficiency Action Plan (2019 EE Action Plan) is the state's roadmap for an energy-efficient and low-carbon future for buildings. Energy efficiency is a key piece of California's efforts to lessen the impacts of climate change, reduce the economic burden of energy consumption on low-income populations, and complement sustainability efforts in the state. The CEC's 2019 EE Action Plan charts the progress toward doubling energy efficiency savings in buildings, industry, and agriculture; achieving increased energy efficiency in existing buildings; and reducing greenhouse gas emissions (GHGs) from buildings. Through robust, sustainable

[9] California Energy Commission. About. Accessed July 2021 at: https://www.energy.ca.gov/about.

[10] California Energy Commission. 2008 Energy Action Plan. February 2008. July 2021 at https://www.cpuc.ca.gov/industries-and-topics/natural-gas/energy-action-plans.

[11] California Energy Commission. 2019 California Energy Efficiency Action Plan. Executive Summary. Page 1 Accessed July 2021 at: https://www.energy.ca.gov/filebrowser/download/1900.

marketplaces, California can achieve its energy and climate goals and deliver benefits to California residents

State of California Integrated Energy Policy (SB 1389)[12]

In 2002, the Legislature passed Senate Bill 1389, which required the CEC to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicles miles traveled and accommodate pedestrian and bicycle access.

The CEC adopted the 2019 Integrated Energy Policy Report on February 20, 2020.[13] The 2013 Integrated Energy Policy Report provides the results of the CEC's assessment of a variety of issues, including:

- Decarbonizing buildings;
- Integrating renewables;
- Energy efficiency;
- Energy equity;
- Integrating renewable energy;
- Updates on Southern California electricity reliability;
- Climate adaptation activities for the energy sector;
- Natural gas assessment;
- Transportation energy demand forecast; and,
- California Energy Demand Forecast.

California Senate Bill 1037[14] and Assembly Bill 2021[15]

[12] California Legislative Information. Senate Bill No. 1389, Bowen (2002). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1389:

[13] Energy Commission. 2019 Integrated Energy Policy Report. February 2020. Accessed July 2021 at: https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report.

[14] California Legislative Information. Senate Bill No. 1037 (Kehoe, 2005). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060SB1037.

[15] California Legislative Information. Assembly Bill 2021 (Levine, 2006). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB2021.

In 2003, the CPUC and CEC adopted an Energy Action Plan that prioritized resources for meeting California's future energy needs, with energy efficiency identified as the highest priority. Since then, this policy goal has been codified as SB 1037 and AB 2021 into statute through legislation that requires electric utilities to meet their resource needs first with energy efficiency.[16] This policy also set new targets for statewide annual energy demand reductions of 32,000 GWh and 800 million therms from business-as-usual[17]—enough to power more than 5 million homes or replace the need to build about ten new large power plants (500 MW each). These targets represent a higher goal than existing efficiency targets established by CPUC for investor-owned utilities due to the inclusion of innovative strategies. Achieving the State's energy efficiency targets will require coordinated efforts from the State, the federal government, energy companies, and customers. The California Air Resources Board (ARB) will work with CEC and CPUC to facilitate these partnerships. California's energy efficiency programs for buildings and appliances have generated more than $50 billion in savings over the past three decades.

California Global Warming Solutions Act of 2006 (Assembly Bill 32)[18]

Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission and CEC with providing information, analysis, and recommendations to the California Air Resources Board regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1976 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically (every three years) to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focused on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity.

[16] SB 1037 (Kehoe, Chapter 366, Statutes of 2005) and AB 2021 (Levine, Chapter 734, Statutes of 2006) directed electricity corporations subject to CPUC's authority and publicly owned electricity utilities to first meet their unmet resource needs through all available energy efficiency and demand response resources that are cost-effective, reliable, and feasible.

[17] The savings targeted here are additional to savings currently assumed to be incorporated in CEC's 2007 demand forecasts. However, CEC has initiated a public process to better determine the quantity of energy savings from standards, utility programs, and market effects that are embedded in the baseline demand forecast.

[18] California Legislative Information. Assembly Bill 32 (Nunez, 2006). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32.

Therefore, increased energy efficiency results in decreased GHG emissions. The 2016 update to the standards also include residential improvements for attics, walls, water heating, and lighting; and nonresidential improvement including alignment with the ASHRAE 90.1 2013 national standards, as well as efficiency requirements for elevators and direct digital controls[19] The 2016 standards were implemented to reduce new single family residential usage by 28 percent for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards.[20] The 2019 update to the standards also include residential improvements for attics, walls, water heating, and lighting; and nonresidential improvement including alignment with the ASHRAE 90.1 2017 national standards, as well as efficiency requirements for elevators and direct digital controls.[21] The 2019 standards require solar photovoltaic systems and encourage demand responsive technologies for new homes; established requirements for newly constructed healthcare facilities; and update lighting requirements making maximum use of LED technology in nonresidential buildings.[22]

California Green Building Standards Code (Title 24, Part II, CALGreen)[23]

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally a volunteer measure, the code became mandatory in 2010. The most recent update (2019) went into effect on January 1, 2020.[24] CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building; planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications.

[19] California Energy Commission. 2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings for the 2016 Building Efficiency Standards. Accessed July 2021 at: https://www.energy.ca.gov/publications/2015/building-energy-efficiency-standards-residential-and-nonresidential-buildings.

[20] California Energy Commission. 2016 Building Energy Efficiency Standards Frequently Asked Questions. https://www.calbo.org/sites/main/files/file-attachments/2016_building_energy_efficiency_standards_faq.pdf?1520982927.

[21] California Energy Commission. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings for the 2019 Building Efficiency Standards. Accessed July 2021 at: https://www.energy.ca.gov/publications/2008/2019-building-energy-efficiency-standards-residential-and-nonresidential.

[22] California Energy Commission. 2019 Building Energy Efficiency Standards Frequently Asked Questions. March 2018. Accessed July 2021 at: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf.

[23] California Department of General Services, Building Standards Commission. CALGreen. Accessed July 2021 at: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen.

[24] International Code Council. Guide to the 2019 California Green Building Standards Code, Nonresidential. Pages viii – ix. Accessed July 2021 at: https://codes.iccsafe.org/content/GCGBSCNR2019/guide-to-the-2019-california-green-building-standards-code-includes-verification-guidelines-nonresidential

Clean Energy and Pollution Reduction Act (SB 350)[25]

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.[26]

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078,[27] the state's Renewables Portfolio Standard (RPS) was amended under SB 107[28] to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08[29] was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2[30] was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopted the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09,[31] was required to adopt regulations consistent with these 33 percent renewable energy targets.

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

[25] California Legislative Information. Senate Bill No. 350 (2015). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350.

[26] California Energy Commission. Clean Energy and Pollution Reduction Act – SB 350. Accessed July 2021 at: https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350.

[27] California Legislative Information. Senate Bill No. 1078 (Sher, 2002). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1078.

[28] California Legislative Information. Senate Bill No. 107 (2006). Accessed July 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060SB107.

[29] California State Library. Executive Order S-14-08 (Schwarzenegger, 2008). Accessed July 2021 at: https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/38-S-14-08.pdf.

[30] California Legislative Information. Senate Bill No. SBX1-2 (2011). Accessed July 2021 at: http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110412_chaptered.html.

[31] California State Library. Executive Order S-21-09 (Schwarzenegger, 2009). Accessed July 2021 at: https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/38-S-21-09.pdf.

ERM-4.1 Energy Conservation and Efficiency Measures - The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new construction and renovation of existing structures in accordance with State law.

ERM-4.2 Streetscape and Parking Area Improvements for Energy Conservation - The County shall promote the planting and maintenance of shade trees along streets and within parking areas of new urban development to reduce radiation heating;

ERM-4.3 Local and State Programs - The County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources.

ERM-4.4 Promote Energy Conservation Awareness - The County should coordinate with local utility providers to provide public education on energy conservation programs

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible.

PROJECT SPECIFIC ENERGY USAGE

Electricity and Natural Gas

Implementation of the proposed Project would, over time, result in the commitment of additional electricity and natural gas within the Planning Area. However, the Project is the Cutler-Orosi Community Plan Update and no development proposals are being considered at this time. The Project is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). The Community Plan does not include any specific development projects (such as residential, commercial, or industrial uses, etc.), and future proposed development(s) will be evaluated on a case-by-case basis regarding impacts to energy resources.

Construction Fuel Consumption

Implementation of the proposed Project would, over time, result in the commitment of additional fuel consumption within the Planning Area. However, as noted earlier, the Project is the Cutler-Orosi Community Plan Update and no development proposals are being considered at this time. The Project is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). The Community Plan does not include any specific development projects (such as residential, commercial, or industrial uses, etc.), and future proposed development(s) will be evaluated on a case-by-case basis regarding impacts to energy resources.

CEQA REQUIREMENTS AND ENERGY CONSERVATION STANDARDS

In addition to the recommended thresholds for environmental analysis provided in Appendix G of the CEQA Guidelines, Appendix F requires that an EIR disclose and discuss the potential impacts of a project on energy resources and conservation. An EIR's discussion of impacts on energy resources should provide analysis and discussion of the project's potential to result in the wasteful, inefficient, or irretrievable commitment of energy resources, with particular attention towards electrical, natural gas, and transportation fuel supplies. While no specific thresholds are provided by the CEQA Guidelines, Appendix F offers several recommendations for inclusion in an analysis of impacts on energy resources to determine whether a project would:

a. Use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner;

b. Constrain local or regional energy supplies, affect peak and base periods of electrical or natural gas demand, require or result in the construction of new electrical generation and/or transmission facilities, or necessitate the expansion of existing facilities, the construction of which could cause significant environmental effects; or

c. Conflict with existing energy standards, including standards for energy conservation.

IMPACT EVALUATION

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Project Impact Analysis: ***No Impact***

As noted previously, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Project is being prepared to accommodate an annual growth rate of 1.3% (consistent with the Tulare County General Plan). The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Update does not include any specific development projects (such as residential, commercial, or industrial uses, etc.), and future proposed development(s) will be evaluated on a case-by-case basis regarding impacts to energy resources.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County, the 8-County area of the San Joaquin Valley, and PG&E service area. Future projects that could be developed by-right under the proposed Project may, over time, incrementally contribute to impacts on energy resource demand and conservation when considering the cumulative impact of concurrently planned

projects. However, future by-right developments will be required to comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. Furthermore, any future discretionary actions requiring agency approval will also be required to comply with local, regional, state, and federal policies and undergo additional CEQA review. Therefore, it is not anticipated that the Project's contribution to cumulative impacts generated with projects provided in Chapter 4 Summary of Cumulative Impacts, would result in a significantly considerable wasteful use of energy resources, such that the Project, and other cumulative projects, would have a cumulative effect on energy conservation. Therefore, the Project would result in a ***Less Than Significant Cumulative Impact*** through the Year 2030 Planning horizon to the Energy resource.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Project Impact Analysis: ***No Impact***

The proposed Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency as it does not include any development proposals that would impact this Resource. As noted earlier, the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The proposed Project is consistent with the Tulare County General Plan, the Tulare County Climate Action Plan, and when adopted, the Cutler-Orosi Community Plan 2021 Update. These plans contain policies intended to assist the County in achieving its goals for energy consumption and conservation goals. Therefore, the proposed Project will have ***No Impact*** regarding this resource.

Cumulative Impact Analysis: ***No Impact***

There are no development proposals as part of this Update and there are no development proposals within the vicinity of the proposed Project or within the communities of Cutler and Orosi. The geographic area of this cumulative analysis is Tulare County, the 8-County area of the San Joaquin Valley, and PG&E service area. Future projects that could be developed by-right under the proposed Project may, over time, incrementally contribute to impacts on energy resource demand and conservation when considering the cumulative impact of concurrently planned projects. However, future by-right developments will be required to comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. For instance, all projects involving the development of new buildings must be designed to conform to CALGreen and the 2019

California Energy Code. Furthermore, any future discretionary actions requiring agency approval will also be required to comply with local, regional, state, and federal policies and undergo additional CEQA review. Therefore, it is not anticipated that the Project's contribution to cumulative impacts generated with projects provided in Chapter 4 Summary of Cumulative Impacts, would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the proposed Project would result in ***No Cumulative Impact*** on energy resources.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

The proposed Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the proposed Project will result in ***No Impact*** regarding this resource.

DEFINITIONS AND ACRONYMS

Definitions

British Thermal Unit: British Thermal Unit (BTU) is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit. As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 123,000 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively. Natural gas usage is expressed in therms. A therm is equal to 100,000 BTU.

Acronyms

AB	Assembly Bill (State of California Assembly)
CARB or ARB	California Air Resources Board
BTU	British Thermal Unit
CALGreen	California Green Buildings Standards Code
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
GHG	Greenhouse Gas
GWh	Gigawatt Hour
kWh	Kilowatt Hour
MWh	Megawatt Hour
OPR	Office of Planning and Research
SB	Senate Bill (State of California Senate)

PG&E	Pacific Gas and Electric Company
U.S. DOT	United States Department of Transportation

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California Energy Commission. California Energy Consumption Database. Gas Consumption by County and Plan Area. Energy reports accessed July 2021 at: http://ecdms.energy.ca.gov/gasbycounty.aspx and http://ecdms.energy.ca.gov/gasbyplan.aspx

California Energy Commission. 2008 Energy Action Plan. February 2008. Accessed July 2021 at: https://www.cpuc.ca.gov/industries-and-topics/natural-gas/energy-action-plans (for a copy of the report click the link to the Energy Action Plan Update).

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Geology and Soils
Chapter 3.7

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in ***No Impact*** related to Geology and Soils for Items 3.7 a) through e) through the Year 2030 Planning horizon. No mitigation measures will be required. However, as development occurs, it is possible to encounter previously unknown paleontological resources. Based on this uncertainty, the project would result in a ***Less Than Significant Impact With Mitigation*** to the paleontological resource through the Year 2030 Planning horizon. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the analysis as follows.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Geology and Soils. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to

future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Geology and Soils in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item including:

- Located on a Fault line
- Hazard to people or property
- Project subject to landslides
- Located on a liquefaction zone

ENVIRONMENTAL SETTING

"Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the county, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the county are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains."[2]

"The San Joaquin and Tulare Basins constitute the southern two-thirds of the Central Valley of California, which is part of a large, northwest trending, asymmetric structural trough, filled with marine and continental sediments up to 6 miles (mi) thick. The bedrock geology of the areas adjacent to the east and west sides of the San Joaquin Valley contrasts sharply."[3]

[1] CEQA Guidelines Section 15126.2 (a).

[2] Tulare County 2030 General Plan 2030 Update. Background Report. Page 8-4.

[3] U.S. Geological Survey. Environmental Setting of the San Joaquin-Tulare Basins, California. Water-Resources Investigations Report 97-4205. 1998. Page 5. Accessed July 2021 at: https://pubs.usgs.gov/wri/1997/4205/report.pdf

"This contrast between the composition of the highlands on the east and west sides of the valley has a profound influence on the sediments and water quality in the valley. Alluvial, Pleistocene nonmarine, and other nonmarine deposits of the eastern part of the valley were derived primarily from the weathering of granitic intrusive rocks of the Sierra Nevada, with lesser contributions from the sedimentary and metasedimentary rocks of the foothills. In the eastern part of the valley, sediments derived primarily from the Sierra Nevada are highly permeable, medium- to coarse-grained sands with low total organic carbon, forming broad alluvial fans where the streams enter the valley. These deposits generally are coarsest near the upper parts of the alluvial fans and finest near the valley trough. "[4]

Geology & Seismic Hazards

Seismic hazards, such as earthquakes, can cause loss of human life and property damage, disrupt the local economy, and undermine the fiscal condition of a community. Secondary seismic hazards, including subsidence and liquefaction, can cause building and infrastructure damage.

Seismicity

"Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges."[5]

"Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building."[6]

Faults

[4] Ibid. 6.
[5] Tulare County. Draft Cutler-Orosi Community 2021 Plan. Page 59. Included as Appendix "F" of this Draft EIR
[6] Tulare County 2030 General Plan 2030 Update. Background Report. Page 8-4.

"Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in a geologic timescale. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered "potentially" active."[7]

"Although a number of faults have been located along the western edge of the Sierra Nevada Mountains, none are known to be active. The Owens Valley Fault Group poses the greatest seismic threat."[8]

"There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault.** The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the "Central California Active Area," where many earthquakes have originated.

- **Owens Valley Fault Group.** The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.

- **Clovis Fault.** The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, and is therefore classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts."[9]

Groundshaking

"Groundshaking is the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of groundshaking, which is directly related to the magnitude of a quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased groundshaking over longer periods of

[7] Ibid.
[8] Op. Cit. 8-5 and 8-6.
[9] Op. Cit. 8-6 and 8-7.

time, thereby affecting a larger area. Groundshaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by the population."[10]

"The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in this area will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake."[11]

"Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County's buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake-resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings (URMs) as a safety issue during earthquakes. In high risk areas (Bay Area) inventories and programs to mitigate this issue are required. Because Tulare County is not a high risk area, state law only recommends that programs to retrofit URMs are adopted by jurisdictions."[12]

Liquefaction

"Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits."[13]

"Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the

[10] Op. Cit. 8-7.
[11] Op. Cit.
[12] Op. Cit. 8-8.
[13] Op. Cit. 8-8 and 8-9.

1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted.

No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the San Joaquin Valley portion of the County. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction."[14]

Settlement

"Settlement can occur in poorly consolidated soils during groundshaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to groundshaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County."[15]

Soil Characteristics

The Goshen area soils are typical of those found in semi-arid regions and are referred to as transported soils, indicating that they have been deposited some distance from their parent rock. The soils which characterize the Goshen area originated from granitic rocks of the Sierra Nevada and contain quantities of mica, quartz, feldspars and granitic sand. (See **Figure 3.7-1**) (Source: USDA Soils Survey Map, Visalia) The predominant soil described as follows:

"According to the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), and the Soil Survey of Tulare County, the following soil types are located in Cutler-Orosi:

> **Exeter loam, 0 to 9 percent slopes,** consists of moderately deep to a duripan, moderately well drained soils that formed in alluvium mainly from granitic sources.

[14] Op. Cit. 8-9.
[15] Op. Cit.

Greenfield sandy loam, 0 to 9 percent slopes, consists of deep, well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield sandy loam is located in the northwest quadrant of Orosi. It is a class I agricultural soil which is well-suited for urbanization, including buildings, streets and roads, and septic tanks.

Hanford Sandy loam, 0 to 15 percent slopes, consists of very deep, well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are on stream bottoms, floodplains and alluvial fans.

Honcut sandy loam, 0 to 9 percent slopes, consists of very deep, well drained soils that formed in moderately coarse textured alluvium from basic igneous and granitic rocks. Honcut soils are on floodplains and moderately sloping alluvial fans.
San Joaquin loam, 0 to 9 percent slopes, consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources.

Tujunga sand, 0 to 12 percent slopes, consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas."[16]

Landslides

"Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).

Tulare County has three geologic environments: the valley, foothills, and mountains. The range in topography between these three areas presents a range of landslide hazards. As of June 2009, the California Geological Survey had not developed landslide hazard identification maps for Tulare County. However, it is reasonable to assume that certain areas in Tulare County are more prone to landslides than others."[17] "There is no risk of large landslides in the valley area of the county due to its relatively flat topography. There is, however, the potential for small slides and slumping along the steep banks of rivers or creeks."[18]

Wastewater Treatment/Sanitary Sewer

[16] Draft Cutler-Orosi Community Plan 2021 Update. Page 60.
[17] Tulare County General Plan 2030 Update. Background Report. Page 8-10
[18] Ibid.

"In March 1980, the Cutler Public Utility District entered into the Joint Wastewater Treatment and Disposal Facilities Agreement with the Orosi Public Utility District, forming the Cutler-Orosi Joint Power Wastewater Authority for the purpose of operating a wastewater treatment and disposal facility. The Cutler PUD is currently allocated 1,255 equivalent dwelling units of capacity at the Cutler-Orosi Wastewater Treatment Facility (WWTF). The Orosi PUD is currently allocated 2,162 equivalent dwelling units of capacity at the WWTF. The Cuter and Orosi PUDs are currently under a building moratorium, and have waiting lists for additional sewer connections."[19]

"According to Cutler and Orosi PUD staff, the sanitary sewer collection system is very old and pipe leaks and breaks cause significant problems including groundwater inflow/infiltration and cross contamination with groundwater. The Orosi PUD is implementing a phased sewer collection system rehabilitation/replacement project, and has awarded a contract for the construction of the phase 1 improvements.

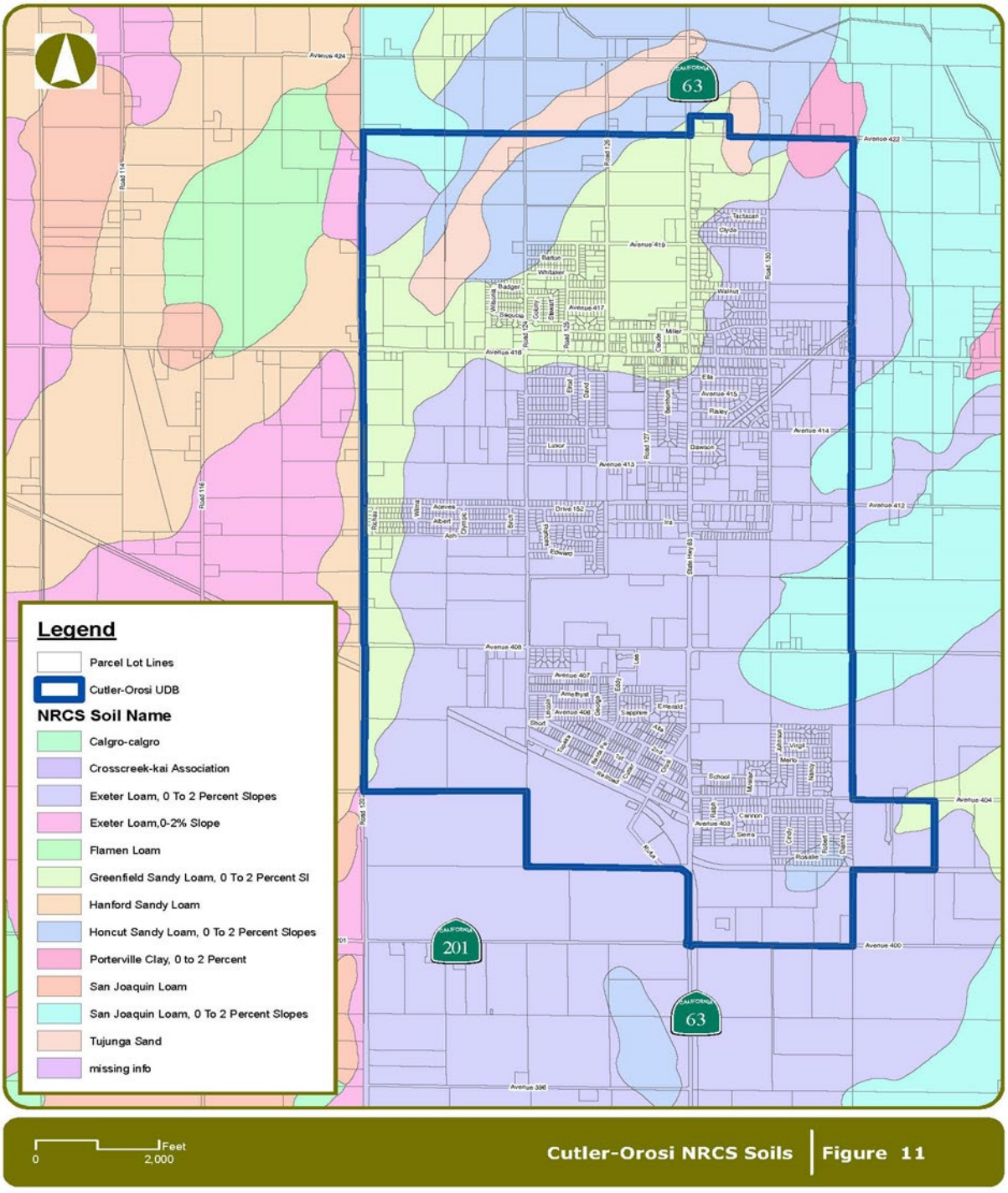
Treatment and disposal of the collected effluent is provided at the Cutler-Orosi WWTF, jointly owned and operated by the Cutler PUD and Orosi PUD. The Cutler-Orosi WWTF serves the communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana. It operates under the provisions of Waste Discharge Requirements (WDR) Order No. 97-106, issued by the California Regional Water Quality Control Board (RWQCB). The average dry weather flow at the WWTF is approximately 1.40 MGD, with a historical high flow of 1.89 MGD. Flow at the WWTF is greater during winter months than in summer months due to inflow/infiltration of storm water into the collection system during winter months, and ex-filtration during dry summer months. The PUDs will be able to more accurately predict the remaining capacity at the WWTF once repairs are made to leaking pipes throughout the collection system.

The Cutler PUD and Orosi PUD are working with Tulare County to secure funding that will be used to correct deficiencies that would increase the capacity of the WWTF. Proposed improvements will modernize the facility and add capacity to bring the serviceable operational limits to 2.4 MGD."[20]

[19] 2021 Cutler-Orosi Community Plan Update. Page 75.
[20] Ibid.

Figure 3.7-1

Cutler-Orosi NRCS Soils Map



REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

Seismic Hazards Mapping Act

"The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards. The SHMA was passed by the legislature following the 1989 Loma Prieta earthquake.

The SHMA requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires."[21]

California Building Code

"The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards."[22]

Alquist-Priolo Earthquake Fault Zoning Act

"The Alquist - Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations are conducted in order to demonstrate that development sites are not threatened by

[21] State of California Department of Conservation. Seismic Hazards Mapping Act. Accessed July 2021 at: https://www.conservation.ca.gov/cgs/shma
[22] Tulare County General Plan 2030 Update. Background Report. Page. 8-3.

future surface displacement (Hart, 1997). Surface fault rupture is not necessarily restricted to the area within an Alquist-Priolo Zone."[23]

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-7.2 Soil Productivity - The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other similar agencies and organizations.

HS-2.1 Continued Evaluation of Earthquake Risks - The County shall continue to evaluate areas to determine levels of earthquake risk.

HS-2.4 Structure Siting - The County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.

HS-2.7 Subsidence - The County shall confirm that development is not located in any known areas of active subsidence. If urban development may be located in such an area, a special safety study will be prepared and needed safety measures implemented. The County shall also request that developments provide evidence that its long-term use of ground water resources, where applicable, will not result in notable subsidence attributed to the new extraction of groundwater resources for use by the development.

HS-2.8 Alquist-Priolo Act Compliance - The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones (pursuant to and as determined by the Alquist-Priolo Earthquake Fault Zoning Act; Public Resource code, Chapter 7.5) unless the specific provision of the Act and Title 14 of the California Code of Regulations have been satisfied.

IMPACT EVALUATION

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo

[23] Op. Cit.

Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Project Impact Analysis: ***No Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

No substantial faults are known to traverse Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation[24]. The nearest major fault line, which lies outside of Tulare County, is the San Andreas fault zones; approximately 60 miles west of the proposed Project site. According to the Five County Seismic Safety Element (FCSSE), Tulare County is located in the V-1 zone. This zone includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities.[25] Therefore, ***No Impact*** would result from the rupture of a known earthquake fault through the Year 2030 Planning horizon.

ii) Strong seismic ground shaking?

Project Impact Analysis: ***No Impact***

Tulare County is characterized as Severity Zone "Nil" and "Low" for ground-shaking events.[26] De-aggregation of the hazard was performed by using the USGS Interactive De-aggregation website and it was found that all faults within a 20 mile radius are quaternary faults between the ages of 750,000 and 1.6 million years old. [27] Quaternary faults are defined

[24] State of California Department of Conservation, Alquist-Priolo Earthquake Fault Zone Maps. Accessed July 2021 at: https://www.conservation.ca.gov/cgs/alquist-priolo and https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/

[25] Five County Seismic Safety Element. Summary & Policy Recommendations II. Pages 3 and 15. Available upon request at the Tulare County RMA Office.

[26] Tulare County General Plan 2030 Update. Part 1-Goals and Policies Report. Page 253.

[27] USGS. Earthquake Hazards Program: Custom Mapping & Analysis Tools. Accessed July 2021 at: http://geohazards.usgs.gov/qfaults/ca/California.php.

as those faults that have been recognized at the surface and which have evidence of movement in the past 1.6 million years, which is the duration of the Quaternary Period.[28] Due to the distance and types of faults in the proposed Project vicinity, strong ground shaking is unlikely. Therefore, ***No Impact*** would occur as a result of this Project through the Year 2030 Planning horizon.

iii) Seismic-related ground failure, including liquefaction?

Project Impact Analysis: ***No Impact***

The proposed Project area is not located within an area mapped to have a potential for soil liquefaction. Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content. Based on available subsurface data, the proposed Project site is underlain by shallow rock that would not liquefy. Also, as noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As such, there would be ***No Impact*** caused by seismic-related ground failure, including liquefaction, as a result of this Project through the Year 2030 Planning horizon.

iv) Landslides?

Landslides are not a significant threat as the topography in the proposed Project area is relatively flat. No geologic landforms exist on or near the site that would result in a landslide event. Therefore, there proposed Project would result in ***No Impact*** through the Year 2030 Planning horizon.

As noted in the Response to 3.7 a), due to the relatively flat nature of the building areas, there is no potential for lateral spreading; as such, there would be ***No Impact*** through the Year 2030 Planning horizon.

Project Impact Analysis: ***No Impact***

The existing Project area is not located within a published Earthquake Fault Zone and the potential for ground rupture is low. As earthquakes are possible throughout the State of California, the Project will be required to comply with the Tulare County General Plan and Zone II of the Uniform Building Code. In addition, the existing Project area is not located within an area mapped to have a potential for soil liquefaction. As the Project area is

[28] USGS. Earthquake Hazards Program: Glossary. Accessed July 2021 at: http://earthquake.usgs.gov/hazards/qfaults/glossary.php#Q.

relatively flat, there is no potential for landslides. Also, as noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. ***No Project-specific Impacts*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will not increase geotechnical related impacts off-site. Also, as noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate project growth and land use needs. ***No Cumulative Impact*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

Mitigation Measures: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, implementation of the proposed Project will not cause a significant impact to this Checklist Item. ***No Cumulative Impacts*** would occur as a result of this Project through the Year 2030 Planning horizon and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Project Impact Analysis: ***No Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is

surrounded by agriculture.

The proposed Project area is primarily flat and as such, soil erosion is not anticipated. As future development occurs, site construction activities would potentially involve earthmoving activities to shape land, trenching for sewer and potable water distribution systems, pouring concrete for sidewalks, curbs, and gutters, and other typical construction-related activities. These activities could expose soils to erosion processes. The extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions.

To prevent water and wind erosion during the construction-related activities, a Storm Water Pollution Prevention Plan (SWPPP) would be developed for future developments within the Project areas as required for all projects which disturb more than one acre in size. As part of the SWPPP, applicants would be required to provide erosion control measures to protect the topsoil. Any stockpiled soils would be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction period are not anticipated. Therefore, the Project would result in a ***No Impact*** as a result of this Project through the Year 2030 Planning horizon. As such, no mitigation is required.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project area is not located on slope. The proposed Project also does not involve changes that will affect off-site hillsides. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Therefore, ***No Impact*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

Implementation of the proposed Project will not cause a significant impact, potential Project-specific impacts related to this Checklist Item ***No Cumulative Impacts*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a

result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Project Impact Analysis: ***No Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

Substantial grade change would not occur in the topography to the point where the future developments within the proposed Project area would expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, liquefaction or collapse. According to the Five County Seismic Safety Element the V-1 zone the proposed Project site inhabits has a low to moderate risk of subsidence.

There is no evidence to suggest that soils located within the Project area are subject to lateral spreading. Subsidence is due to non-compacted, wind-deposited, soils consolidation under load, to oil or gas production or to severe overdraft existing in the Project area. There would be ***No Impact*** as a result of this Project through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR. Also, as noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

As such, ***No Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific and No Cumulative Impact*** related to this Checklist item will occur through the Year 2030 Planning horizon.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Project Impact Analysis: ***No Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

Future developments within the Planning area will be developed on soils that are classified as moderate with respect to expansion attributes. Typical compliance with the Uniform Building Code is required. Therefore, ***No Impact*** will occur as a result of this Project through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will have a minor impact on soil compaction. This minor compaction will have a *de minimus* impact of on-site soils. Also, as noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As such, ***No Cumulative Impact*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant No Impact***

As noted earlier, expansive soils were not identified within the Project site. Therefore, ***No Project-specific*** or ***Cumulative Impact*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Project Impact Analysis: ***No Impact***

Also, as noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

Cutler Public Utility District (CPUD)

"CPUD has a total of four developed wells. Two of the wells are active and two of the wells are inactive at this time (see Figure 14 [in the Community Plan]). The two inactive wells (Well Nos. 3 and 4) were taken out of service because water test results exceeded the Maximum Contaminant Level (MCL) limit of nitrates. Well Nos. 5 and 6 are the two active wells that supply water for the community.

There is a well within CPUD (Well No. 7) that is not owned by CPUD. The well is owned by the Tulare County Redevelopment Agency and is used for fire flow at a local industry. Well No. 8 was completed in April 2006. Water quality testing; however, has revealed high nitrate concentrations approaching the MCL. Future use of Wells No. 8 is uncertain. Well No. 9 was drilled on the site for a proposed blending tank facility for CPUD. The well facility, when completed, will allow for water from Well Nos. 3 and 4 to be used in combination with flows from Well No. 5 and Well No. 9. The availability of sufficient quantities of low nitrate concentration water from CPUD's wells is uncertain.

The CPUD utilizes one elevated water storage tank for water system storage and pressure. The tank holds 50,000 gallons. The tank is connected to the distribution system by a common fill inlet and outlet configuration.

The CPUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of 2,930 GPM, or 4.22 MGD.

The CPUD water system (see Table 23 [in the Draft Community Plan]) **s**upports 1,032 total connections including three industry-packing houses, and one box plant. Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is concluded that the District's water system is currently operating at or near its capacity, and cannot support additional connections at this time.

The amount of developable land available, including the availability of infrastructure, are two factors that have limited community growth from occurring, including affordable housing objectives, and commercial enterprise.

Currently, the District charges a flat rate for water service in the community. The District should consider installing water meters on all connections to their water system.

Lovell High School, which is operated by the Cutler-Orosi Joint Unified School District, has requested water capacity from the Cutler PUD. The PUD plans to provide the school with water service pending the approval and implementation of the blending tank project. The school is located at the northwest quadrant of Avenue 392 and State Route 63, which is currently outside of the Cutler PUD boundary and sphere of influence (SOI). It is anticipated that the PUD would provide water service to the school on a contractual basis".[29]

Orosi Public Utility District (OPUD)

The Orosi PUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of approximately 2,930 GPM, or 4.22 MGD. The District also has a water storage tank with a capacity of approximately 750,000 gallons (see Table 23 [in the Community Plan]).

OPUD has a total of six developed wells. Four of the wells are active and two of the wells are inactive at this time. Well No. 6 is inactive and was taken out of service because water test results exceeded the MCL limit for nitrates. Well No. 9 is also considered inactive due to high nitrates and is not connected to the system because of a development dispute. Wells Nos. 4, 5A, 7, and 8 are the four active wells that supply water for the community.

OPUD has one ground level water storage tank and four hydropneumatic tanks that also provide some limited water storage. The ground level tank has a capacity of 750,000 gallons and delivers water to the system through two booster pumps located at the site of Well No. 5A. There is a 10,000 gallon hydropneumatic tank at each of the active wells. OPUD's water supply and distribution system is shown on Figure 2-3 [in the Water Supply Study 2008]."[30]

[29] Tulare County. Draft Cutler-Orosi Community 2021 Plan. Pages 71-72. Included in Appendix "F" of this Draft EIR.
[30] Ibid. 73.

"The Orosi PUD water system supports 1,788 total connections to their water system including 1,639 residential connections, 132 commercial connections, 3 agricultural connections, and 14 connections, which are inactive."[31]

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As future development occurs, such development will also be required to connect to the wastewater treatment system. Therefore, ***No Impact*** would occur as a result of this Project through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, Tulare County 2030 General Plan EIR, and/or Cutler and/or Orosi Public Utility Districts.

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The proposed Project does not include a septic system and will have no impacts related to soils suitable for septic tanks. In addition, the proposed Project will have no impacts related to the use of septic tanks on other properties. As such, ***No Cumulative Impact*** related to this Checklist Item will occur as a result of this Project through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, future development will be required to connect to the wastewater treatment system, therefore the Project-specific or Cumulative Impacts related to this Checklist Item will result in ***No Impact*** as a result of this Project through the Year 2030 Planning horizon.

f.) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

[31] Tulare County LAFCO. Group 2 Municipal Service Reviews. Final Report. May 2006. Page 4-1. Prepared by Omni Means, Ltd. Accessed July 2021 at: https://lafco.co.tulare.ca.us/lafco/index.cfm/msr/group-2-msrs/

The Project is an update to the Cutler-Orosi Community Plan and no development proposals are being considered at this time. The Community Plan is being prepared to accommodate a growth rate of 1.3% (consistent with the Tulare County General Plan). According to the draft Community Plan, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

Also, noted in Response to Item 3.5.a) in Chapter 3.5 Cultural Resources, a cultural resources records search was conducted of the site. No paleontological resources or sites, or unique geologic features were identified during that search.

Although it cannot conclusively be demonstrated that no subsurface paleontological resources are present, it is possible to mitigate potentially significant impacts with **Mitigation Measure 7-1**. With implementation of **Mitigation Measure 7-1**, Project-specific impacts related to this Checklist Item will be reduced ***to Less Than Significant Impact With Mitigation*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As such, the proposed Project would result in ***Less Than Significant Project-Specific and Cumulative Impacts With Mitigation*** through the Year 2030 Planning horizon.

Mitigation Measure(s):

7-1. The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan

shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 7-1**, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced ***Less Than Significant With Mitigation*** through the Year 2030 Planning horizon.

DEFINITIONS/ACRONYMS

Definitions

Fault - "A fault is a fracture in the Earth's crust that is accompanied by displacement between the two sides of the fault. An active fault is defined as a fracture that has shifted in the last 10,000 to 12,000 years (Holocene Period). A potentially active fault is one that has been active in the past 1.6 million years (Quaternary Period). A sufficiently active fault is one that shows evidence of Holocene displacement on one or more of its segments or branches (Hart, 1997)."[32]

Liquefaction - "Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake-induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content."[33]

Magnitude - "Earthquake magnitude is measured by the Richter scale, indicated as a series of Arabic numbers with no theoretical maximum magnitude. The greater the energy released from the fault rupture, the higher the magnitude of the earthquake. Magnitude increases logarithmically in the Richter scale; thus, an earthquake of magnitude 7.0 is thirty times stronger than one of magnitude 6.0. Earthquake energy is most intense at the point of fault slippage, the epicenter, which occurs because the energy radiates from that point in a circular wave pattern. Like a pebble thrown in a pond, the increasing distance from an earthquake's epicenter translates to reduced groundshaking."[34]

Acronyms

CEQA	California Environmental Quality Act
CPUD	Cutler Public Utility District
DEIR	Draft Environmental Impact Report
FCSSE	Five County Seismic Safety Element
MCL	Maximum Contaminant Level

[32] General Plan Background Report. Page 8-2.
[33] Ibid.
[34] Op. Cit.

SHMA	Seismic Hazards Mapping Act
SWPPP	Storm Water Pollution Prevention Plan

REFERENCES

Five County Seismic Safety Element, Summary & Policy Recommendations II. Pages 3 and 15. Available upon request at the Tulare County RMA Office.

State of California Department of Conservation. Alquist-Priolo Earthquake Fault Zone Maps. Accessed July 2021 at: https://www.conservation.ca.gov/cgs/alquist-priolo and https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/

State of California Department of Conservation. Seismic Hazards Mapping Act. Accessed July 2021 at: https://www.conservation.ca.gov/cgs/shma.

State of California. Title 14. Natural Resources. Division 6. Resources Agency. Chapter 3: Guidelines for the Implementation of the California Environmental Quality Act. Section 15126.2 (a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC. See PDF pages 192-193.

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U.S. Geological Survey (USGS). Environmental Setting of the San Joaquin-Tulare Basins, California. Water-Resources Investigations Report 97-4205. 1998. Accessed July 2021 at: https://pubs.usgs.gov/wri/1997/4205/report.pdf

USGS. Earthquake Hazards Program: Custom Mapping & Analysis Tools. Accessed July 2021 at: http://geohazards.usgs.gov/qfaults/ca/California.php.

Greenhouse Gas Emissions
Chapter 3.7

SUMMARY OF FINDINGS

The proposed Project will result in ***Less Than Significant Impacts*** related to Greenhouse Gas (GHG) Emissions through the Year 2030 Planning horizon. A detailed review of potential impacts is provided in the following analysis. An Air Quality and Greenhouse Gas Analysis Technical Memorandum prepared by Tulare County Resource Management Agency (RMA) staff, which is included as Appendix "A" of this document, is used as the basis for determining this Project will result in ***Less Than Significant Impacts***.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

"(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are

still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project."[1]

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, project-related greenhouse gas (GHG) emissions would normally have a significant effect on climate change if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The San Joaquin Valley Unified Air Pollution Control District (Air District) has not adopted a numerical threshold, such as a volume of GHG per capita ($MTCO_2e$ per person) or a maximum annual volume (e.g. 3,000 $MMTCO_2e$ per year), for GHG emissions. The Air District however, has provided guidance to assist Lead Agencies which established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards (BPS). Specifically, the Air District's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* document provides the following process for evaluating GHG significance.[2]

- "Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

[1] CEQA Guidelines. Section 15064.4

[2] San Joaquin Valley Unified Air Pollution Control District (SJVAPCD or Air District), Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA. Pages 4-5. Accessed September 2021 at: http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf.

- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business-as-Usual (BAU*), including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG." [3]

ENVIRONMENTAL SETTING

"Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)."[4]

"In 2007, Tulare County generated approximately 5.2 million tonnes of CO_2e [carbon dioxide equivalent]. The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources."[5]

Table 3.7-1
Emissions by Sector in 2007

Sector	CO_2e (tonnes/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	**5,208,060**	**100%**
Per Capita	**36.1**	

Source: Tulare County General Plan 2030 Update Recirculated Draft EIR. Page 3.4-22. Table 3.4-2.

[3] Ibid.

[4] Tulare County General Plan 2030 Update. Background Report. Page 6-17. Accessed September 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf.

[5] Tulare County General Plan 2030 Update. Recirculated DEIR. Page 3.4-32.

"In 2030, Tulare County is forecast to generate approximately 6.1 million tons of CO_2e. The largest portion of these emissions (59 percent) is attributed to dairies/feedlots, while the second largest portion (20 percent) is from mobile sources. Per capita emissions in 2030 are projected to be approximately 27 tons of CO_2e per resident."[6]

Table 3.7-2
Emissions by Sector in 2030

Sector	CO_2e (tonnes/year)	% of Total
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	**6,105,480**	**100%**
Per Capita	**27.4**	

Source: Tulare County General Plan 2030 Update Recirculated Draft EIR, page 3.4-22, Table 3.4-3

The Tulare County General Plan 2030 Update Background Report contains the following: "Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO_2 and methane are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF_6 is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.

Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

[6] *Ibid.*

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great."[7]

According to AB 32, which is discussed further below, "The [California State] Legislature finds and declares all of the following: (a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems. (b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state."[8]

REGULATORY SETTING

Applicable Federal, State, and local regulations specific to greenhouse gas resources are described below. The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County 2030 General Plan Update Background Report, Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR), the California Air Resources Board (ARB) website, and the United States Environmental Protection Agency (US EPA) website.

Federal Agencies & Regulations

United States Environmental Protection Agency Greenhouse Gas Endangerment Findings

"On December 7, 2009, Administrator Lisa Jackson signed a final action, under Section 202(a) of the Clean Air Act, finding that six key well-mixed greenhouse gases constitute a threat to

[7] Op. Cit. 6-27 to 6-28
[8] California Air Resources Board, website: http://www.arb.ca.gov/cc/ab32/ab32.htm

public health and welfare, and that the combined emissions from motor vehicles cause and contribute to the climate change problem."[9]

"The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases — carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) — in the atmosphere threaten the public health and welfare of current and future generations."[10]

However, as indicated by the US EPA website accessed on July 2, 2017, "Thank you for your interest in this topic. We are currently updating our website to reflect EPA's priorities under the leadership of President Trump and Administrator Pruitt. If you're looking for an archived version of this page, you can find it on the January 19 snapshot."[11]

State Agencies & Regulations

California Clean Air Act (CAA)

"The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards,… which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California's standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans."[12]

California Air Resources Board

"The Air Resources Board (ARB or Board) has established State ambient air quality standards (State standards) to identify outdoor pollutant levels considered safe for the public. After State standards are established, State law requires ARB to designate each area as attainment, nonattainment, or unclassified for each State standard. The area designations, which are based on the most recent available data, indicate the healthfulness of air quality throughout the State."[13]

"On April 26, 1996, the Board approved the "Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas" as part of the State Implementation Plan (SIP) for Carbon Monoxide. U.S. EPA approved this revision on June 1, 1998 and redesignated the ten areas to attainment. On October 22, 1998, ARB revised the SIP to incorporate the effects of the recent Board action to remove the wintertime oxygen requirement for gasoline in certain areas. On July 22, 2004, ARB approved an update to the SIP that shows how the ten areas will

[9] United States Environmental Protection Agency, http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html
[10] United States Environmental Protection Agency, http://www.epa.gov/climatechange/endangerment/index.html
[11] *EPA, website: https://www.epa.gov/sites/production/files/signpost/cc.html, accessed July 14, 2017.*
[12] *Tulare County General Plan 2030 Update RDEIR, pages 3.3-2 to 3.3-3*
[13] *ARB, http://www.arb.ca.gov/desig/desig.htm, accessed July 14, 2017*

maintain the standard through 2018, revises emission estimates, and establishes new on-road motor vehicle emission budgets for transportation conformity purposes."[14]

Executive Order S-3-05

"Executive Order S-3-05 was signed by Governor Schwarzenegger on June 1, 2005. This executive order established [GHG] emission reduction targets for California. Specifically, the executive order established the following targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the EO [executive order], the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state…"[15]

Assembly Bill 32: California Global Warming Solutions Act of 2006

"In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

In December 2007, CARB approved the 2020 emission limit of 427 million metric tons of CO2 equivalents (CO2e) of greenhouse gases (CARB, page 2, 2007b). The 2020 target of 427 million metric tons of CO2e requires the reduction of 169 million metric tons of CO2e, or approximately 30 percent, from the State's projected 2020 emissions of 596 million metric tons of CO2e (business-as-usual).

[14] *ARB, http://www.arb.ca.gov/planning/sip/co/co.htm, accessed July 14, 2017*
[15] *Tulare County General Plan 2030 Update RDEIR, pages 3.4-4 to 3.4-5*

Also in December 2007, CARB adopted mandatory reporting and verification regulations pursuant to AB 32. The regulations became effective on January 1, 2009, with the first reports covering 2008 emissions. The mandatory reporting regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. Currently, the draft regulation language identifies major facilities as those that generate more than 25,000 metric tons/year of CO2e. Cement plants, oil refineries, electric-generating facilities/providers, cogeneration facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons/year CO2e, make up 94 percent of the point source CO2e emissions in California (CARB, page 12, 2007a)."[16]

Climate Change Scoping Plan

"In June, 2008, CARB published its *Climate Change Draft Scoping Plan* (CARB, page ES-1, 2008a). The *Climate Change Draft Scoping Plan* reported that CARB met the first milestones set by AB 32 in 2007: developing a list of early actions to begin sharply reducing greenhouse gas emissions; assembling an inventory of historic emissions; and establishing the 2020 emissions limit. After consideration of public comment and further analysis, CARB adopted the *Climate Change Scoping Plan* (Scoping Plan) in December, 2008 (CARB, page ES-1, 2008b). The Scoping Plan proposes a set of actions designed to reduce overall carbon emissions in California. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long term commitment to AB 32 implementation. (CARB, pages ES-3 – ES-4, 2008b)

The *Scoping Plan* notes that "[a]fter Board approval of this plan, the measures in it will be developed and adopted through the normal rulemaking process, with public input" (CARB, page ES-4, 2008b).

The *Scoping Plan* states that local governments are "essential partners" in the effort to reduce greenhouse gas emissions, and that they have "broad influence and, in some cases, exclusive jurisdiction" over activities that contribute to greenhouse gas emissions. Local governments may

[16] *Ibid. 3.4-5*

contribute to significant direct and indirect greenhouse gas emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Many of the proposed measures to reduce greenhouse gas emissions rely on local government actions. The plan encourages local governments to reduce greenhouse gas emissions by approximately 15 percent from current levels by 2020 (CARB, pages 26-27, 2008b).

The *Scoping Plan* also included recommended measures that were developed to reduce greenhouse gas emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures also put the State on a path to meet the long-term 2050 goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels. These measures were presented to and approved by the CARB on December 11, 2008.

The total reduction for the recommended measures is 174 million metric tons/year of CO2e, slightly exceeding the 169 million metric tons/year of CO2e of reductions estimated to be needed in the *Scoping Plan*. The measures in the Scoping Plan approved by the Board will be developed over the next two years and be in place by 2012."[17]

"The First Update to the Scoping Plan was approved by the Board on May 22, 2014, and builds upon the initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines ARB's climate change priorities for the next five years, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use."[18]

"On April 29, 2015, the Governor issued Executive Order B-30-15 establishing a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. All state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. ARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions."[19]

[17] *Op. Cit. 3.4-5 to 3.4-6*
[18] *ARB, https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm, accessed July 14, 2017.*
[19] *ARB, https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm, accessed July 14, 2017.*

Senate Bill 97

"Governor Schwarzenegger signed Senate Bill (SB) 97, a CEQA and greenhouse gas emission bill, into law on August 24, 2007. SB 97 requires the Governor's Office of Planning and Research (OPR) to prepare CEQA guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency certified and adopted the guidelines on December 31, 2009 and submitted them for review by the Office of Administrative Law. The adopted amendments will become effective after the Office of Administrative Law completes its review of the adopted amendments and rulemaking file, and transmits the adopted amendments to the Secretary of State for inclusion in the California Code of Regulations. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.[20]

Governor's Office of Planning and Research (OPR)

The OPR published a Technical Advisory in June of 2008 that is an informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents to serve in the interim until guidelines are established pursuant to SB 97. This Advisory recommends that CEQA documents include quantification of estimated GHG emissions associated with a proposed project and that a determination of significance be made. "The technical advisory points out that neither CEQA nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. "This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable" (OPR, page 4, 2008). OPR recommends that "the global nature of climate change warrants investigation of a Statewide threshold of significance for GHG emissions" (OPR, page 4, 2008). Until such a standard is established, OPR advises that each lead agency should develop its own approach to performing an analysis for projects that generate greenhouse gas emissions (OPR, page 5, 2008)."[21]

Senate Bill 375

"SB 375 (Steinberg) was signed into law in 2008. It builds on AB 32 to connect the reduction of GHG emissions from cars and light trucks to land use and transportation policy. The transportation sector represents the State's largest contributor of greenhouse gases. Accordingly, SB 375 seeks (1) to use the regional transportation planning process to help achieve AB 32 goals; (2) to use CEQA streamlining as an incentive to encourage residential projects which help achieve AB 32 goals to reduce GHG emissions; and (3) to coordinate the regional housing needs allocation process with the regional transportation planning process. SB 375 aligns regional land use, transportation, housing and greenhouse gas reduction planning efforts. It requires CARB to set greenhouse gas emission reduction targets for passenger vehicles and light trucks for 2020 and 2035. The targets are for the 18 Metropolitan Planning Organizations in California. Metropolitan Planning Organizations are responsible for preparing Sustainable Community

[20] *Tulare County General Plan 2030 Update RDEIR, page 3.4-9*
[21] *Ibid. 3.4-9 to 3.4-10*

Strategies and, if needed, Alternative Planning Strategies, that will include the region's strategy for meeting the established targets. Tulare County Association of Governments is the Metropolitan Planning Organization for Tulare County. Implementation of SB 375 is a multi-year process, with regional GHG reduction targets to be determined in late 2010."[22]

California Attorney General

In response to the 2009 updates to the CEQA Guidelines, the Attorney General's Office (AGO) prepared two advisory documents in January 2010 to assist land use agencies in addressing greenhouse gases in CEQA evaluations. The advisory document *Addressing Climate Change at the Project Level* provides a variety of mitigation measures to address climate change, one of the most serious environmental effects affecting the State of California. The list that was provided was not intended to be an exhaustive list and not all mitigation measures would apply to all projects.[23]. The advisory document *Sustainability and General Plans: Example of Policies to Address Climate Change* provides land use agencies with a list of resources available to assist in integrating sustainability and climate change into general planning and local land use regulations. The document provides a list of examples of "exemplary and innovative" local sustainability and climate policies and measures that agencies could incorporate into their general plans.[24]

"The Attorney General is a leader in the State's efforts to fight global warming and promote a clean, lower-carbon economy. The Attorney General's Office, representing state agencies and acting independently in the name of the People:

- Successfully defended – and will continue to defend – the State's landmark clean cars laws. [See Clean Cars]
- Filed numerous actions that caused the U.S. Environmental Protection Agency to finally begin regulating greenhouse gas pollution, and continues to ensure that the federal government does its job. [See Clean Air Act]
- Through comments and litigation, ensures that local governments take account of climate change and plan for a more sustainable future for all members of the community. [See California Environmental Quality Act]
- Promotes renewable energy and enhanced energy efficiency in California, supporting hundreds of thousands of new jobs and improved air quality. [See Green Energy]
- Defends the Air Resources Board in challenges to its landmark carbon and greenhouse gas reduction regulations. The Board has defended against challenges to actions taken under AB 32, the Global Warming Solutions Act of 2006, which requires California to reduce its total greenhouse gas emissions to 1990 levels by 2020. The Board has also defended against challenges to the Low Carbon Fuel Standard by industry groups representing petroleum, refining, trucking, and ethanol interests. The Low Carbon Fuel Standard is a landmark regulatory effort to reduce the carbon content of all transportation

[22] *Op. Cit. 3.4-11*
[23] *Attorney General's Office, website: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf, accessed July 14, 2017.*
[24] *Attorney General's Office, website:* https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/GP_policies.pdf?, accessed July 14, 2017.

fuel used in California, requiring at least a ten percent reduction in carbon intensity of fuel by the year 2020."[25]

Regional Policy & Regulations

California Air Pollution Control Officers Association (CAPCOA)

"In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating GHG emissions under CEQA (CAPCOA, 2008). The CAPCOA white paper strategies are not guidelines and have not been adopted by any regulatory agency; rather, the paper is offered as a resource to assist lead agencies in considering climate change in environmental documents."[26]

The California Association of Air Pollution Control Officers (CAPCOA) represents all thirty-five local air quality agencies throughout California. CAPCOA, which has been in existence since 1975, is dedicated to protecting the public health and providing clean air for all our residents and visitors to breathe, and initiated the Greenhouse Gas Reduction Exchange.[27]

"The Greenhouse Gas Reduction Exchange (GHG Rx) is a registry and information exchange for greenhouse gas emissions reduction credits designed specifically to benefit the state of California. The GHG Rx is a trusted source of locally generated credits from projects within California, and facilitates communication between those who create the credits, potential buyers, and funding organizations."[28] Four public workshops were held throughout the state including in the SJVAPCD. The mission is to provide a trusted source of high quality California-based greenhouse gas credits to keep investments, jobs, and benefits in-state, through an Exchange with integrity, transparency, low transaction costs and exceptional customer service.[29]

San Joaquin Valley Air Pollution Control District (Air District)

The Air District has jurisdiction over eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the San Joaquin Valley Air Basin portion of Kern. The Air District "is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies."[30] As previously discussed the Air District has determined that the quantification of GHG emissions is expected for all projects that require an Environmental Impact Report. The Air District has provided guidance documents identifying recommended significance thresholds for GHG emissions.[31]

[25] *Attorney General's Office, https://oag.ca.gov/environment/climate-change, accessed July 14, 2017.*
[26] *Tulare County General Plan 2030 Update RDEIR, page 3.4-12*
[27] *California Air Pollution Control Officers Association, http://www.capcoa.org/, accessed July 14, 2017.*
[28] *Ibid.*
[29] *California Air Pollution Control Officers Association, http://www.ghgrx.org/, accessed July 14, 2017.*
[30] *Air District, website: http://www.valleyair.org/General_info/aboutdist.htm#Mission, accessed July 14, 2017.*
[31] *Air District, Final Staff Report, pages 65-66; Guidance for Valley Land-use Agencies, pages 4-5; and District Policy, pages 8-9*

The Air District adopted the *Climate Change Action Plan* (CCAP) in August 2008. "The CCAP directed the District Air Pollution Control Officer to develop guidance to assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas (GHG) emissions on global climate change,

On December 17, 2009, the San Joaquin Valley Air Pollution Control District (District) adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA, and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA.

Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change."[32]

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan - The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,

[32] *Air District, http://www.valleyair.org/Programs/CCAP/CCAP_menu.htm, accessed July 14, 2017.*

2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions - The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

AQ-1.10 Alternative Fuel Vehicle Infrastructure - County shall support the development of necessary facilities and infrastructure needed to encourage the use of low or zero-emission vehicles (e.g. electric vehicle charging facilities and conveniently located alternative fueling stations, including CNG filling stations.)

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating a strong sense of place,
2. Mixing land uses, and
3. Preserving open space

Tulare County Climate Action Plan

"The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation."[33]

"Tulare County Climate Action Plan. The Tulare County adopted a Climate Action Plan (CAP) on August 28, 2012. The CAP is an implementation measure of the 2030 General Plan Update. The CAP follows a four-step process recommended by the Institute for Local Government, including identification of a baseline year and emissions inventory; projected future year inventories; and provision of policies, regulations, and programs that achieve reductions by the target years. The CAP uses 2007 as the baseline year, and contains projections for 2020 and

[33] Tulare County Climate Action Plan, page 1

2030. The policies, regulations, and programs considered in the CAP include those by federal, state, and local governments. The measures were quantified to the extent possible.

Summary of CAP Actions

- Identifies sources of greenhouse gas emissions caused by activities within the unincorporated areas of Tulare County and estimates how these emissions may change over time.
- Establishes a reduction target of reducing Tulare County's greenhouse gas emissions to demonstrate consistent with AB 32 (2006) and CARB Scoping Plan targets. This requires a reduction of 6 percent on average from new development in excess of those achieved from adopted regulations.
- Provides energy use, transportation, land use, water conservation, and solid waste strategies to bring Tulare County's greenhouse gas emissions levels to the reduction target. Mitigates the impacts of Tulare County activities on climate change (by reducing greenhouse gas emissions consistent with the direction of the State of California via AB 32, Governor's Order S-03-05, and the 2009 amendments to the CEQA Guidelines to comply with SB 97 (2008). The CEQA Guidelines encourage the adoption of policies or programs as a means of addressing comprehensively the cumulative impacts of projects. (See CEQA Guidelines, Sections 15064(h)(3), 15130(c).)
- Allows the greenhouse gas emissions inventory and CAP to be updated every five years and to respond to changes in science, effectiveness of emission reduction measures and federal, state, regional, or local policies to further strengthen the County's response to the challenges of climate change.
- Provides substantial evidence that the emission reductions estimated in the CAP are feasible.
- Serves as the threshold of significance within the County of Tulare for climate change impacts, by which all applicable developments within the County will be reviewed.
- Proposed development projects that are consistent with the emission reduction and adaptation measures included in the CAP and the programs that are developed as a result of the CAP, would be considered to have a less than significant cumulative impact on climate change and emissions consistent with CEQA Guidelines 15064(h)(3) as amended to comply with SB 97."

IMPACT EVALUATION

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As indicated in the GHG Report (see Appendix "D") prepared by consultants First Carbon Solutions;

"Section 15064.4(b) of the CEQA Guidelines amendments for greenhouse gas emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from greenhouse gas emissions.

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards. The County has an adopted Climate Action Plan (CAP), which will be used in this analysis to determine significance for this impact."[34]

"Consistency with Climate Action Plan

A CAP was adopted for Tulare County in August 2012 (Tulare 2012). The CAP states the following:

> Commercial and industrial development in Tulare County during the 2020 and 2030 planning timeframes will be subject to conditions of approval and mitigation measures that will reduce greenhouse gas emissions beyond State regulations in most projects. For industrial projects, where the SJVAPCD is a Responsible Agency, the project will be expected to implement Best Performance Standards included in the SJVAPCD Guidelines for Addressing Greenhouse Gas Emissions on the processes and stationary equipment that emit greenhouse gases to levels that meet or exceed State targets . . . . To demonstrate consistency with the ARB Scoping Plan 2020 target of 26.2 percent reduction in land use related sectors compared with business as usual, new development in the County subject to discretionary approval would need to provide an overall

[34] Tulare County – Goshen Community Plan Update Greenhouse Gas Analysis Report" prepared by First Carbon Solutions, September 2014, pages 37-38

reduction of 6 percent beyond that provided by State and SJVAPCD regulation. Based on this analysis, implementation of the policies contained in the General Plan 2030 Update and available project specific measures can achieve an overall reduction of 6 percent of development-related greenhouse gas emissions under Tulare County jurisdiction. When reductions from regulations and programs are included, new development would produce approximately 31 percent fewer greenhouse gas emissions compared with the 2020 business as usual scenario.

To determine significance, the analysis quantified project-related construction and operational greenhouse gas emissions under a business-as-usual scenario, and then compared these emissions with those emissions that would occur accounting for all project-related design features and regulatory measures adopted after 2005. Operational emissions were analyzed for the year 2020 to demonstrate consistency with the targets contained in the Tulare County CAP and AB 32. Operational or long-term emissions occur over the life of the project. For assumptions and descriptions for the emission sources, please refer to Section 3 of this report."[35]

"Impact Analysis

Construction

Greenhouse gas emissions generated during construction are shown in Table 5 [of the GHG Report and as Table 3.7-2 of this DEIR]. The SJVAPCD does not have a recommendation for assessing the significance of construction related emissions. Most construction-related emissions would occur prior to the year 2020, which is the year the State is required to reduce its greenhouse gas emissions to 1990 levels. Additionally, emissions from construction would be temporary. In order to account for the construction emissions, the emissions were amortized based on the life of the development (residential – 50 years; commercial/industrial – 25 years) and added to the operational emissions. Because the project includes a mixture of residential and commercial/industrial land uses, a 30-year life of the project was assumed in order to provide a conservative estimate."[36]

Table 3.7-2 Construction Greenhouse Gas Emissions

Land Uses	Total $MTCO_2e$ per year
Residential	
Commercial	
Industrial	
Total	
Amortized Emissions (based on 30 year life of	

[35] Ibid. 38
[36] Op. Cit. 38-39

project)	
Note: $MTCO_2e$ = metric tons of carbon dioxide equivalents Source: CalEEMod output (Appendix A).	

"Operation Emissions in 2020

Operational emissions were analyzed for the year 2020 to demonstrate consistency with the targets contained in the Tulare County CAP and AB 32. Emissions were also assessed for 2030 to reflect the Community Plan horizon year. The "project" in this case is the amount of new development anticipated to occur between the baseline conditions in 2014 and the 2020 target year and between 2014 and the 2030 plan horizon year. The amount of development is based on a 1.3 percent per year growth rate projected through the 2030 plan horizon year. The mix of land uses is based on current development found in Goshen with increases applied equally to all land use categories.

To determine significance, the analysis quantified project-related greenhouse gas emissions under a business-as-usual scenario, and then compared these emissions with those emissions that would occur accounting for all project-related design features and regulatory measures adopted after 2005. As shown in Table 6 [of the GHG Report and as Table 3.7-3 in this DEIR], the reduction from business-as-usual emissions in 2020 is 31.40 percent, which is above the 26.2-percent threshold established by the CAP and the 6-percent threshold for additional reductions from new development. Therefore, the project is consistent with the County achieving the required AB 32 scoping plan reductions. Impacts would be less than significant."[37]

Table 3.7-3 Project Operational Greenhouse Gases in 2020

Source	Emissions ($MTCO_2e$ per year)		
	2020 Business as Usual	2020 (with Regulation)	Percent Reduction (%)
Area			
Energy			
Mobile			
Waste			
Water			
Amortized Construction Emissions			
Total			
		Significance Threshold	29.0%

[37] Op. Cit. 39

Are emissions significant?	No

Note:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
Source of business as usual emissions: CalEEMod output for the year 2005 (Appendix A).
Source of 2020 emissions: CalEEMod output for the year 2020 (Appendix A).

"The business-as-usual emissions represent those that would have occurred without regulations enacted pursuant to AB 32. The 2020 emissions with regulations represent emissions with reductions from regulations enacted as part of AB 32, in particular, the following:

Mobile: Pavley and Low Carbon Fuel Standard regulation reductions are calculated by CalEEMod. The estimated reduction is 36.69 percent of the mobile sources GHG emissions (motor vehicle emissions).

Electricity: Renewable Portfolio Standards require a 33-percent renewable portfolio by the year 2020. The estimated reduction from electricity GHG emissions is 28.75 percent.

Water: Compliance with California Green Building Code Standards. The estimated reduction is 14.15 percent.

In addition to comparing the project with the Tulare County CAP, the analysis also considered the recommendations of the District. The District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards. As shown above, the project is consistent with the CAP adopted by Tulare County. In a situation where a CAP was not adopted, the District considers whether the project will reduce or mitigate greenhouse gas levels by 29 percent from business-as-usual levels. Business as usual is determined by modeling emissions with only regulations in effect in 2005 to be consistent with the baseline used in the Scoping Plan (SJVAPCD 2009). This level of greenhouse gas reduction is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008. As mentioned in the Regulatory Environment section, this reduction level was revised in the Final Supplement to the Functional Equivalent Document, which was included in ARB's 2011 re-approval of the Scoping Plan. This new greenhouse gas reduction level of 21.7 percent from business as usual in 2020 accounts for less growth in emissions related to the recent recession. As shown in Table 6, the project not only meets the CAP reductions but also exceeds the 29-percent threshold established by the District."[38]

"Operation Emissions in 2030

No threshold or state target has been set for 2030. Therefore, it is necessary to use different criteria for significance after 2020. The continued buildout of the Community Plan after 2020 results in increases in greenhouse gas emissions; however, the increases are offset by

[38] Op. Cit. 40-41

the continued implementation of regulations currently in place on greenhouse gas emissions and by compliance with the adopted General Plan and CAP. The overall growth projected for the Goshen Community Plan is relatively small, as shown in the land use assumptions tables (Table 2 and Table 3). In addition, the State anticipates continued increases in energy efficiency that will ultimately result in "net zero" energy consumption in new development and increases in the number of zero emission vehicles operated in the State under the Advanced Clean Car Program. Compliance with SB 375 reduction targets for light duty vehicles will provide continued reductions in emissions from that source (10 percent) through SB 375's 2035 milestone year. Since the project will continue to comply with existing and future regulations and the General Plan and CAP will continue to be implemented through 2030, the growth projected for 2030 would not result in significant greenhouse gas impacts. Finally, in the event that the State adopts new targets beyond 2020, the County would adopt revisions to the CAP if needed to demonstrate consistency with any new reduction target amounts.

As shown in Table 7 [of the GHG Report and as Table 3.7-4 of this DEIR], the reduction from business-as-usual emissions in 2030 is 35.36 percent, demonstrating continued progress toward reducing greenhouse gas emissions by the 2030 Plan horizon year."[39]

Table 3.7-4 Project Operational Greenhouse Gases in 2030

Source	Emissions ($MTCO_2e$ per year)		
	2030 Business as Usual	2030 (with Regulation and Design Features)	Percent Reduction (%)
Area			
Energy			
Mobile			
Waste			
Water			
Amortized Construction Emissions			
Total			
		Significance Threshold	N/A
		Are emissions significant?	No

Note:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
Source of business as usual emissions: CalEEMod output for the year 2005 (Appendix A).
Source of 2030 emissions: CalEEMod output for the year 2030 (Appendix A).

"**Level of Significance Before Mitigation**

[39] Op. Cit. 41

Less Than Significant Impact.

Mitigation Measures

No Mitigation Measures are required.

Level of Significance After Mitigation

Less Than Significant Impact."[40]

As indicated in the Air Quality and Greenhouse Gas Technical Memorandum (see Appendix "A, at that time of the NOP and preparation of the GHG Report, no specific development projects had been identified within the Community Plan Update Planning Area and an expansion to the Urban Development Boundary (UDB) had not been proposed. Since the release of the NOP, two community-wide programs and four development projects have been identified within the Community Plan Update Planning Area: Goshen Complete Streets Program, Road Maintenance Program, Papich Construction, Goshen Village East, Dollar General, and Thandi Commercial Development. These six projects were evaluated for consistency with the growth assumptions evaluated in the GHG Report to determine whether additional analysis would be required.

"The Community Plan Update includes a ±515-acre expansion to the UDB that was not anticipated at the time of the NOP. However, other than the Complete Streets and Road Maintenance Programs and the four approved development project previously discussed, there are no other development projects proposed with the Community Plan Update. The UDB expansion is intended to provide potential project proponents with flexibility and greater opportunity for suitable development sites within the community. Future growth within the expansion area is expected to be consistent with the County's 1.3% annual growth projections. As such, the proposed UDB expansion is intended to provide opportunities to stimulate economic development to meet the needs of the existing and future community and nearby residents and it is anticipated to capture pass through traffic along the State Route 99 Corridor. The proposed UDB expansion area boundaries are necessary to place the UDB boundary lines along logical alignments (such as property lines and roadways). As an unknown number of proposals may occur throughout the entire UDB within the lifetime of the Community Plan Update, the plan is intended to direct the density, intensity, and types of growth needed to meet the needs of the community.

The land use growth assumptions and the associated emissions evaluated in the AQA Report are consistent with the proposed Community Plan Update. There are no development projects proposed with the Community Plan Update and the four development projects that have been approved since the time of the NOP are consistent with the emissions analysis provided in

[40] Op. Cit. 42

the AQA Report. No additional emissions analysis is needed for anticipate future land use developments.

The Complete Streets and Road Maintenance Programs were approved after the completion of the AQA Report and the emissions associated with their implementation are not included in the emissions analysis. Additional analysis is required to evaluate potential impacts resulting from implementation of the Complete Streets and Road Maintenance Programs."[41]

"As discussed in the GHG Report prepared in 2014, the project will result in direct and indirect GHG emissions. The GHG Report quantified the GHG emissions of both the short-term construction-related activities and the long-term operations-related activities associated with the future development of the Community Plan Update. The AQA Report found that full buildout of the Community Plan would result in a total of 4,340.68 metric tons of construction-related emissions, which equals 144.69 metric tons per year based on an average 30-year life for development projects. As presented in Table 6 [of the Air Quality and Greenhouse Gas Analysis Technical Memorandum], the Complete Streets and Road Maintenance Programs could generate up to 8,938.45 metric tons of GHG, which averages 687.57 metric tons over the remaining 13-year life of the Community Plan or 297.95 metric tons if amortized over the expected life of future development projects. The amortized construction-related emissions from the Complete Streets and Road Maintenance Programs have been added to the operations-related emissions to determine significance as compared to BAU at Year 2020 and Year 2030 and are presented in Table 8 [Table 3.7-5 of this DEIR] and Table 9 [Table 3.7-6 of this DEIR], respectively.

Table 3.7-5. Greenhouse Gases in Year 2020

	Emissions ($MTCO_2e$ per year)		
Source	2020 Business as Usual	2020 with Regulation	% Reduction
Area			
Energy			
Mobile			
Waste			
Water			
Amortized Construction (development)			
Amortized Construction (road improvements)			
Total			
Significance Threshold			29%
Are emissions significant?			No

Table 3.7-6. Greenhouse Gases in Year 2030

	Emissions ($MTCO_2e$ per year)

[41] Tulare County RMA, Air Quality and Greenhouse Gas Technical Memorandum, Page 25

Source	2020 Business as Usual	2020 with Regulation	% Reduction
Area			
Energy			
Mobile			
Waste			
Water			
Amortized Construction (development)			
Amortized Construction (road improvements)			
Total			
Significance Threshold			---
Are emissions significant?			No

"As demonstrated in Table 8 [Table 3.7-5 of this DEIR] and Table 9 [Table 3.7-6 of this DEIR], implementation of the Goshen Community Plan Update would achieve the 29% reduction from BAU as recommended by the Air District. Furthermore, the Community Plan Update includes policies designed to specifically address GHG emissions, consistent with the Tulare County CAP. Future development projects would be evaluated on a project-by-project basis, and applicable Goshen Community Plan, Tulare County General Plan and Tulare County Climate Action Plan (CAP) policies will be implemented as future developments are identified. As future developments would be required to demonstrate consistency with the Goshen Community Plan, the General Plan, and the County CAP, the Community Plan Update does not conflict with the Tulare County CAP. Implementation of the Community Plan Update, including future growth and road improvements, would have a ***Less Than Significant Project-specific Impacts*** related to this Checklist Item."[42]

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the GHG Report prepared by consultants First Carbon Solutions which is included as Appendix "D" of this DEIR and the Air Quality and Greenhouse Gas Technical Memorandum prepared by RMA staff which is included as Appendix "A" of this DEIR.

The Community Plan Update establishes the planning guidelines for the anticipated growth of the community through the horizon Year 2030. Future developments would be evaluated on a project-by-project basis and would implement all applicable Goshen Community Plan, Tulare County General Plan, and Tulare County CAP policies addressing GHG emissions. The growth projections are consistent with the County CAP and therefore, the emission reduction targets established in AB 32. As such, GHG emissions from future buildout of the Community Plan Update Planning Area would not have a significant impact on the environment. Furthermore, implementation of the Complete Streets and Road Maintenance

[42] Ibid. 26

Programs will further reduce GHG emissions by providing a safer, more walkable community, thereby reducing vehicle miles travelled within the community and by providing free-flowing truck routes that reduce queuing and idling emissions from slow-moving traffic. Therefore, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As the proposed Project is consistent with aforementioned plans, policies, and rules/regulations, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Project Impact Analysis: ***No Impact***

As indicated in the Greenhouse Gases Report (see Appendix "D") prepared by consultants First Carbon Solutions;

"Climate Action Plan Consistency

Tulare County adopted a CAP as part of the Tulare County General Plan Update on August 28, 2012. The CAP requires projects to achieve an average reduction that is 6 percent in excess of the reductions stated in the ARB Scoping Plan and by regional regulations and programs. When combined with reductions anticipated from the ARB Scoping Plan measures and regional regulations and programs, Tulare County emissions would be 26.2 percent below 2020 business-as-usual levels for development related sources, which is the amount needed for the State to reduce emissions to 1990 levels. As shown in Table 6 [of the GHG Report and shown as Table 3.7-4 of this DEIR], the project would exceed the required reduction and would therefore be consistent with the CAP 2020 target.

Since the adoption of the CAP, several additional regulations have been adopted by the State that provide additional reductions beyond those described in the CAP. The largest reductions are from LEV III Light Duty Vehicle Standards and 2013 Title 24 Energy Efficiency Standards as described in

The CAP identifies General Plan policies that would help reduce greenhouse gas emissions; Table 8 [of the GHG Report and shown as Table 3.7-5 of this DEIR] lists the policy titles. For a discussion of the benefits of the policies, refer to the CAP."[43]

[43] Tulare County – Goshen Community Plan Update Greenhouse Gas Analysis Report" prepared by First Carbon Solutions, September 2014, page 42

Table 3.7-5: General Plan Policies Having Greenhouse Gas Emission Reductions

Sustainability and Greenhouse Gas Emissions

PF-1.1	Maintain Urban Edges
PF-1.2	Location of Urban Development
PF-1.3	Land Uses in UDBs/HDBs
PF-1.4	Available Infrastructure
AG-1.7	Conservation Easements
AG-1.8	Agriculture Within Urban Boundaries
AG-1.11	Agricultural Buffers
AG-1.14	Right to Farm Noticing
AG-2.11	Energy Production
AG-2.11	Energy Production
AG-2.6	Biotechnology and Biofuels
AQ-1.6	Purchase of Low Emission/Alternative Fuel Vehicles
AQ-1.7	Support Statewide Global Warming Solutions
AQ-1.8	Greenhouse Gas Emissions Reduction Plan
AQ-1.9	Off-Site Measures to Reduce Greenhouse Gas Emissions
AQ-1.10	Alternative Fuel Vehicle Infrastructure
AQ-2.1	Transportation Demand Management Programs
AQ-2.3	Transportation and Air Quality
AQ-2.4	Transportation Management Associations
AQ-2.5	Ridesharing
AQ-3.1	Location of Support Services
AQ-3.2	Infill Near Employment
AQ-3.3	Street Design
AQ-3.5	Alternative Energy Design
AQ-3.6	Mixed Use Development
LU-1.1	Smart Growth and Healthy Communities
LU-1.2	Innovative Development
LU-1.3	Prevent Incompatible Uses
LU-1.4	Compact Development
LU-1.8	Encourage Infill Development
LU-2.1	Agricultural Lands
LU-3.2	Cluster Development
LU-3.3	High-Density Residential Locations
LU-4.1	Neighborhood Commercial Uses
LU-7.1	Distinctive Neighborhoods
LU-7.2	Integrate Natural Features
LU-7.3	Friendly Streets
LU-7.15	Energy Conservation
ED-2.3	New Industries
ED-2.8	Jobs/Housing Ratio
ED-5.9	Bikeways
ED-6.1	Revitalization of Community Centers
ED-6.2	Comprehensive Redevelopment Plan
ED-6.3	Entertainment Venues
ERM-1.2	Development in Environmentally Sensitive Areas
ERM-1.3	Encourage Cluster Development
ERM-1.4	Protect Riparian Management Plans and Mining Reclamation Plans
ERM-1.6	Management of Wetlands
ERM-1.7	Planting of Native Vegetation
ERM-1.8	Open Space Buffers
ERM-1.14	Mitigation and Conservation Banking Program
ERM-4.1	Energy Conservation and Efficiency Measures
ERM-4.2	Streetscape and Parking Area Improvements for Energy Conservation
ERM-4.3	Local and State Programs
ERM-4.4	Promote Energy Conservation Awareness
ERM-4.6	Renewable Energy
ERM-4.7	Reduce Energy Use in County Facilities
ERM-4.8	Energy Efficiency Standards
ERM-5.1	Parks as Community Focal Points
ERM-5.6	Location and Size Criteria for Parks
ERM-5.15	Open Space Preservation
HS-1.4	Building and Codes
TC-2.1	Rail Service
TC-2.4	High Speed Rail (HSR)
TC-2.7	Rail Facilities and Existing Development
TC-4.4	Nodal Land Use Patterns that Support Public Transit
TC-5.1	Bicycle/Pedestrian Trail System
TC-5.2	Consider Non-Motorized Modes in Planning and Development
TC-5.3	Provisions for Bicycle Use
TC-5.4	Design Standards for Bicycle Routes
TC-5.5	Facilities
TC-5.6	Regional Bicycle Plan
TC-5.7	Designated Bike Paths
TC-5.8	Multi-Use Trails
PFS-1.3	Impact Mitigation
PFS-1.15	Efficient Expansion
PFS-2.	Water Supply
PFS-2.2	Adequate Systems
PFS-3.3	New Development Requirements
PFS-5.3	Solid Waste Reduction
PFS-5.4	County Usage of Recycled Materials and Products
PFS-5.5	Private Use of Recycled Products
PFS-8.3	Location of School Sites
PFS-8.5	Government Facilities and Services
WR-1.5	Expand Use of Reclaimed Wastewater

Table 3.7-5: General Plan Policies Having Greenhouse Gas Emission Reductions

Sustainability and Greenhouse Gas Emissions

ED-6.4	Culturally Diverse Business	WR-1.6	Expand Use of Reclaimed Water
ED-6.5	Intermodal Hubs for Community and Hamlet Core Areas	WR-3.5	Use of Native and Drought Tolerant Landscaping
ED-6.7	Existing Commercial Centers		
SL-3.1	Community Centers and Neighborhoods		
ERM-1.1	Protection of Rare and Endangered Species		

Source: Tulare County General Plan 2030 Update.

"Development within the Goshen Community is required to show consistency with the General Plan, the Goshen Community Plan, and the CAP. Since no specific development projects are proposed as part of the Goshen Community Plan Update, growth is expected to occur in areas currently designated for development. Projects consistent with these plans and built according to county and state standards can be assumed to have a less than significant impact on climate change. New projects requiring additional county approvals would be required to show consistency with plans, regulations, and thresholds in place at the time of approval."[44]

"Consistency with San Joaquin Valley Air Pollution Control District Plans

The District adopted its own procedures for addressing climate change impacts of projects where the District issues a permit. For these projects, the District is either a Lead Agency or a Responsible Agency for CEQA purposes. The procedures do not apply directly to projects subject to County approval; however, development projects that include stationary source emissions requiring a District permit would need to comply with District procedures.

The District adopted the Climate Change Action Plan (CCAP) in 2008, the mandates of which have been described in Section 3.3, Regulatory Framework. The Carbon Exchange Program is not applicable to this project, and the project would not require Voluntary Greenhouse Gas Mitigation Agreements, as greenhouse gas emissions impacts are less than significant. The project would comply with all applicable greenhouse gas regulations contained in the CCAP. The project also achieves the required reductions from business as usual established by the District."[45]

"Consistency with AB 32

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the

[44] Ibid. 44
[45] Op. Cit.

requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 29 percent from business-as-usual emission levels projected for 2020, or about 10 percent from 2008 levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020.

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown In Table 9 [of the GHG Report and shown as Table 3.7-6 in this DEIR], the strategies are either consistent or not applicable to the project."[46]

Table 3.7-6 Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
1. **California Cap-and-Trade Program Linked to Western Climate Initiative.** Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not applicable.** When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. **California Light-Duty Vehicle Greenhouse Gas Standards.** Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing projects in the Community would be subject to the standards.
3. **Energy Efficiency.** Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** This is a measure for the state to increase its energy efficiency standards. However, the project would increase its energy efficiency through existing regulation.
4. **Renewable Portfolio Standard.** Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. Pacific Gas and Electric obtains 19 percent of its power supply from renewable sources such as geothermal. However, residents and businesses in the community will purchase power with increasing amounts of renewable energy content.

[46] Op. Cit. 44-45

Table 3.7-6 Consistency with Scoping Plan Reduction Measures	
Scoping Plan Reduction Measure	**Project Consistency**
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standard is applicable to the fuel used by vehicles that would access the project site.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	**Consistent.** The plan area will be constructed to densities consistent with the 2014 RTP/SCS.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**Consistent.** The standards would be applicable to the light-duty vehicles that would access the project site.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standard is applicable to the fuel used by vehicles that would access the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the vehicles that access the project site.
12. High Speed Rail. Support implementation of a high-speed rail system.	**Not applicable.** It is not likely that industrial sources subject to this measure will be constructed in the community. However, if such a project were proposed, it would require its own environmental review.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Not applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency.

Table 3.7-6 Consistency with Scoping Plan Reduction Measures	
Scoping Plan Reduction Measure	**Project Consistency**
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**Consistent.** The State is to increase the use of green building practices. The project would implement some green building strategies through existing regulation.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**Consistent.** This measure is applicable to the high global warming potential gases that would be used by the project (such as in air conditioning and refrigerators).
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Consistent.** The project would not contain a landfill. The State is to help increase waste diversion. The project would reduce waste with implementation of state mandated recycling and reuse mandates.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Not applicable.** The project site is in an urban, built-up condition. No forested lands exist onsite.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	**Consistent.** This is a measure for state and local agencies. However, project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use.
Source of ARB Scoping Plan Reduction Measure: California Air Resources Board 2008. Source of Project Consistency or Applicability: First Carbon Solutions, 2013.	

"**Level of Significance Before Mitigation**

Less Than Significant Impact.

Mitigation Measures

No Mitigation Measures are required.

Level of Significance After Mitigation

Less Than Significant Impact."[47]

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the GHG Report prepared by consultants First Carbon Solutions which is included as Appendix "D" of this DEIR and the

[47] Op. Cit. 47

Air Quality and Greenhouse Gas Technical Memorandum prepared by RMA staff which is included as Appendix "A" of this DEIR.

As previously discussed, implementation of the Community Plan Update is consistent with the applicable AB 32 Scoping Plan reductions measures and the Air District's CCAP. Future development projects within the Community Plan Update Planning Area will implement applicable Tulare County General Plan and Tulare County CAP policies. As such, implementation of the Community Plan Update will not conflict with applicable state, regional, and local plans, policies or regulation adopted for the purpose of reducing the emissions of greenhouse gases. ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As the proposed Project is consistent with aforementioned plans, policies, and rules/regulations, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS

Definitions

Achieved-in-Practice - Any equipment, technology, practice or operation available in the United States that has been installed and operated or used at stationary source site for a reasonable period of time sufficient to demonstrate that the equipment, technology, practice or operation is reliable when operated in a manner that is typical for the process. In determining whether equipment, technology, practice or operation is Achieved-in-Practice, the District will consider the extent to which grants, incentives or other financial subsidies influence the economic feasibility of its use.

Approved Alternate Technology - Any District approved, Non-Achieved-in- Practice GHG emissions reduction measure equal to or exceeding the GHG emission reduction percentage for a specific BPS.

Baseline - The three year average (2002-2004) of GHG emissions for a type of equipment or operation within an identified class and category, expressed as annual GHG emissions per unit.

Best Performance Standard - For a specific Class and Category, the most effective, District approved, Achieved-In-Practice means of reducing or limiting GHG emissions from a GHG emissions source, that is also economically feasible per the definition of Achieved-in-Practice. BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category.

Business-as-Usual - The emissions for a type of equipment or operation within an identified class and category Projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period

Category - A District approved subdivision within a "class" as identified by unique operational or technical aspects.

Class - The broadest District approved division of stationary GHG sources based on fundamental type of equipment or industrial classification of the source operation.

Global Warming - Global warming is an increase in the temperature of the Earth's troposphere. Global warming has occurred in the past as a result of natural influences, but the term is most often used to refer to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases.

Greenhouse Gas - Greenhouse gas (GHG) emissions are the release of any gas that absorbs infrared radiation in the atmosphere. Generally when referenced in terms of global climate they are considered to be harmful. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrochlorofluorocarbons (HCFCs), ozone (O_3), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Operational Boundaries - Operational boundaries are defined as "[t]he boundaries that determine the direct and indirect emissions associated with operations owned or controlled by the reporting company. This assessment allows a company to establish which operations and sources cause direct and indirect emissions, and to decide which indirect emissions to include that are a consequence of its operations" (GHG Protocol, 2008).

Acronyms and Abbreviations

AB	Assembly Bill
ARB	Air Resources Board (Short for CARB)
BAU	Business As Usual
BPS	Best Performance Standards
CAA	Clean Air Act
Cal EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CERF	Compost Reduction Emission Factor
CH_4	Methane
CO_2	Carbon Dioxide
GHG	Greenhouse Gases
HFCs	Hydrofluorocarbons
MSW	Municipal Solid Waste
N_2O	Nitrous Oxide
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
SF_6	Sulfur Hexafluoride
AIR DISTRICT	San Joaquin Valley Air Pollution Control District

REFERENCES

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Hazards and Hazardous Materials
Chapter 3.9

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, Plan Update, or Update) would result in ***No Impact*** through the Year 2030 Planning horizon. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hazards and Hazardous Materials. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to

hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Hazards and Hazardous Materials in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Create a significant hazard
- Located within one-quarter mile of an existing or proposed school
- Located on a list of hazardous materials sites
- Located within an airport land use plan
- Located within the vicinity of a private airstrip
- Interfere adopted emergency response plan or emergency evacuation plan
- Wildland Fire Risk

ENVIRONMENTAL SETTING

Cutler-Orosi are both bisected in a north-south direction by State Route 63 and approximately separated by approximately .0.5 mile north of Avenue 408. It was bounded on the south by the Atchison Topeka Santa Fe Railroad's right-of-way (currently abandoned railroad track) and agricultural land, on the north and east by agricultural land, and on the west by the railroad, the wastewater treatment plant and two major packinghouses. The western half of Cutler is almost fully developed, whereas the eastern half is less than 50 percent urbanized. The Atchison Topeka Santa Fe Railroad tracks that bounded Cutler to the south is now abandoned right-of-way. The railroad tracks and crossties were removed. The cobble and gravel covered railbed and footprint of the former railroad are still visible. Low-lying grass and vegetation have grown in and along the railbed.

Residential development has occurred on the east side of Cutler. Development to the south and southeast has been restricted by a number of features, including the railbed footprint, the treatment plant, industry, and lands under the Williamson Act. To the north, development has historically been restricted by flooding from Sand Creek. Commercial development is concentrated along both sides of SR 63, while industrial uses are situated along the railbed footprint.

[1] California Environmental Quality Act (CEQA) Guidelines. Section 15126.2 (a).

State Route 63 and Avenue 416 divide Orosi into four neighborhood quadrants. Each quadrant supports a mix of single family, mobile home and rural residential development. Orosi's commercial district is concentrated along SR 63 and the west side of Avenue 416. New Commercial development has been absent in Orosi in recent years. Orosi has little industrial development, and what little there is dispersed in the southern part of the community. Changes, however; would be gradual and the Plan update includes policies which are intended to reduce any impacts associated with hazardous material.

Hazardous Waste Shipments Originating Within Tulare County

"A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). According to Title 22 of the CCR, hazardous materials are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3)."[2]

"Similarly, hazardous wastes are defined as materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3)."[3]

"In 2007, the DTSC Hazardous Waste Tracking System (HWTS) manifest data reports that approximately 5,925 tons of hazardous waste was transported from all categories of generators in Tulare County. As of November 2008, hazardous waste data available for 2008 indicated that approximately 7,160 tons of hazardous waste was generated in the county (DTSC, 2008a). Tulare County contains several categories of hazardous waste generators: Resource Conservation and Recovery Act (RCRA) Large Quantity Hazardous Waste Generator (LQG) and two tiers of hazardous waste generators developed by the Tulare County CUPA, which are identified by the CUPA as within Program Element 2254 and Program Element 2258."[4] No RCRA Large Quantity Generators are located in Cutler-Orosi. However, the nearest are Moore Wallace North America, Inc. (located at 7801 Avenue 304, Visalia, CA), Voltage Multipliers Inc. (Located at 8711 W. Roosevelt Avenue, Visalia) and KAWNEERR/ALCOA (located at 7200 Doe Avenue, Visalia) (see Table 8-1 of the Background Report).[5]

[2] Tulare County General Plan 2030 Update. Background Report. Page 8-26.
[3] Ibid.
[4] Op. Cit. 8-37.
[5] Op. Cit. 8-37 thru 8-38.

REGULATORY SETTING

Federal Agencies & Regulations

Hazardous Material Transportation Act of 1975 (HMTA)

"The Hazardous Materials Transportation Act of 1975 (HMTA) empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Hazardous materials regulations are subdivided by function into four basic areas:

Procedures and/or Policies 49 CFR Parts 101, 106, and 107
Material Designations 49 CFR Part 172
Packaging Requirements 49 CFR Parts 173, 178, 179, and 180
Operational Rules 49 CFR Parts 171, 173, 174, 175, 176, and 177
The HMTA is enforced by use of compliance orders [49 U.S.C. 1808(a)], civil penalties [49 U.S.C. 1809(b)], and injunctive relief (49 U.S.C. 1810). The HMTA (Section 112, 40 U.S.C. 1811) preempts state and local governmental requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement.[6]"

Regulations apply to "…any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials."[7]

Hazardous Materials Transportation Uniform Safety Act of 1990

"In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property.

The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials."[8]

[6] U.S. Department of Labor. Occupational Safety and Health Administration. Transporting Hazardous Materials. Accessed July 2021 at: https://www.osha.gov/trucking-industry/transporting-hazardous-materials#Overview
[7] U.S. Department of Energy, The Office of Health, Safety and Security. Accessed July 2021 at: https://energy.gov/ehss/environment-health-safety-security.
[8] Ibid.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA / "Superfund")

"Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as "Superfund", was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action."[9]

Superfund Amendments and Reauthorization Act (SARA)

"Superfund Amendments and Reauthorization Act SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to $8.5 billion, expanded EPA's response authority, strengthened enforcement activities at Superfund sites; and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List."[10]

Federal Aviation Regulations

Sec. 77.17 — Form and time of notice

(a) Each person who is required to notify the Administrator under §77.13(a) shall send one executed form set (four copies) of FAA Form 7460–1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the construction or alteration will be located. Copies of FAA Form 7460–1 may be obtained from the headquarters of the Federal Aviation Administration and the regional offices.

(b) The notice required under §77.13(a) (1) through (4) must be submitted at least 30 days before the earlier of the following dates:
   (1) The date the proposed construction or alteration is to begin.
   (2) The date an application for a construction permit is to be filed.

[9] General Plan Background Report. 8-20.
[10] Ibid. 8-21.

However, a notice relating to proposed construction or alteration that is subject to the licensing requirements of the Federal Communications Act may be sent to FAA at the same time the application for construction is filed with the Federal Communications Commission, or at any time before that filing.

(c) A proposed structure or an alteration to an existing structure that exceeds 2,000 feet in height above the ground will be presumed to be a hazard to air navigation and to result in an inefficient utilization of airspace and the applicant has the burden of overcoming that presumption. Each notice submitted under the pertinent provisions of this part 77 proposing a structure in excess of 2,000 feet above ground, or an alteration that will make an existing structure exceed that height, must contain a detailed showing, directed to meeting this burden. Only in exceptional cases, where the FAA concludes that a clear and compelling showing has been made that it would not result in an inefficient utilization of the airspace and would not result in a hazard to air navigation, will a determination of no hazard be issued.

(d) In the case of an emergency involving essential public services, public health, or public safety that requires immediate construction or alteration, the 30-day requirement in paragraph (b) of this section does not apply and the notice may be sent by telephone, telegraph, or other expeditious means, with an executed FAA Form 7460–1 submitted within 5 days thereafter. Outside normal business hours, emergency notices by telephone or telegraph may be submitted to the nearest FAA Flight Service Station.

(e) Each person who is required to notify the Administrator by paragraph (b) or (c) of §77.13, or both, shall send an executed copy of FAA Form 117–1, Notice of Progress of Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area involved.

State Agencies & Regulations

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 et seq. (HSAA)

"This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the states 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain threshold level in the EPA's ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup."[11]

California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC)

"Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations (CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous

[11] Ibid. 8-22.

Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the RCRA program in California, and develops regulations, policies, guidance and technical assistance/ training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the state's Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards."[12]

California Occupational Safety and Health Administration (Cal/OSHA)

"Cal/OSHA and the Federal OSHA are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Pursuant to the Occupational Safety and Health Act of 1970, Federal OSHA has adopted numerous regulations pertaining to worker safety, contained in the Code of Federal Regulations Title 29 (29 CFR). These regulations set standards for safe workplaces and work practices, including standards relating to hazardous material handling. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because California has a federally General Plan Background Report December 2007 approved OSHA program, it is required to adopt regulations that are at least as stringent as those identified in 29 CFR. Cal/OSHA standards are generally more stringent than federal regulations."[13]

Hazardous Materials Transport Regulations

"California law requires that Hazardous Waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance, which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing."[14]

Cal/EPA Cortese List

"The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA)."[15] The Cortese List identifies the following:

- Hazardous Waster and Substance Sites
- Cease and desist order Sites

[12] General Plan Background Report. Pages 8-22 and 8-23.
[13] Ibid. 8-23 and 8-24.
[14] Op. Cit. 8-24
[15] Cal/EPA Cortese List background. Accessed July 2021 at: http://www.calepa.ca.gov/sitecleanup/corteselist/Background.htm

- Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit Sites
- Leaking Underground Storage Tank (LUST) Cleanup Sites
- Other Cleanup Sites
- Land Disposal Sites
- Military Sites
- WDR Sites
- Permitted Underground Storage Tank (UST) Facilities Sites
- Monitoring Wells Sites
- DTSC Cleanup Sites
- DTSC Hazardous Waste Permit Sites

According to the DTSC's EnviroStor information, there is one open site on assessment status and one site with a cleanup status shown as active. The Parmenter and Bryan located at 13133 Avenue 416 in Orosi shows a cleanup status as active as of July 2018, and Marroquin Property located at 12589 Avenue 416 in Orosi shows a cleanup status as open-site assessment.

"The Parmenter and Bryan site was purchased in the early 1960's to establish a business for spray application of pesticides. The site housed this business until 1985 when the property was sold. The new owner leased the property to an auto repair shop until 1987. Past practices of the pesticide business contributed to the surface and subsurface soils contamination onsite. Analyses of soil samples showed methomyl, ethylparathion, ethion, and copper (Cu) in the onsite soils. A partially filled pit was found that is believed to contain various chemicals and pesticide bags. A contaminated soils removal action was taken in January 1988. Material within the onsite pit and additional hot spots were excavated and disposed of off-site. During the investigations, reports of improper storage and illegal dumping by the owners were revealed. The site is currently used to store farm and other equipment. An underground fuel storage tank investigation is currently being overseen by Tulare County Environmental Health. Results of this investigation identified trace gasoline constituents, Benzene, toluene, Ethylbenzene and Xyelenes in the groundwater. Tulare County is actively overseeing remedial activities for the groundwater. Further review of past by DTSC staff identified that trace concentrations of DDD, DDE, DDT and chlordane were present in the site surface soils. These areas include the unpaved portions of the site. Evaluation of the trace concentrations of DDD, DDE, DDT and chlordane indicated that through a direct exposure pathway, they posed a potential risk to human due."[16] As for Marroquin Property, "Responsible party has not responded to requests for performing additional groundwater monitoring to date. Single 500 gallon UST was removed from the site in June 1988 and was identified by inspection and laboratory analysis as having an unauthorized release. This site has been an open investigation for twenty two years."[17]

Airport Land Use

[16] California Department of Toxic Substances Control (DTSC) Envirostor. Accessed July 2021 at: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=54070063.
[17] Ibid.

The purpose of the California State Aeronautics Act (SSA) pursuant to Public Utilities Code (PUC), Section 21001 et seq., "is to protect the public interest in aeronautics and aeronautical progress." The California Department of Transportation, Division of Aeronautics, administers much of this statute. The purpose of the California Airport Land Use Planning Handbook (*Handbook*) is to provide guidance for conducting airport land use compatibility planning as required by Article 3.5, Airport Land Use Commissions, and PUC Sections 21670 – 21679.5. Article 3.5 outlines the statutory requirements for Airport Land Use Commissions (ALUCs) including the preparation of an Airport Land Use Compatibility Plan (ALUCP). Article 3.5 mandates that the Division of Aeronautics create a *Handbook* that contains the identification of essential elements for the preparation of an Airport Land Use Compatibility Plan (PUC Sections 21674.5 and 21674.7). This *Handbook* is intended to (1) provide information to ALUCs, their staffs, airport proprietors, cities, counties, consultants, and the public, (2) to identify the requirements and procedures for preparing effective compatibility planning documents, and (3) define exemptions where applicable.

California State Aeronautics Act

The California State Aeronautics Act is implemented by Caltrans Division of Aeronautics. The purpose of this Act is to: (1) foster and promote safety in aeronautics; (2) ensure state laws and regulations relating to aeronautics are consistent with federal aeronautics laws and regulations; (3) assure that persons residing in the vicinity of airports are protected against intrusions by unreasonable levels of aircraft noise; and (4) develop informational programs to increase the understanding of current air transportation issues. Caltrans Division of Aeronautics issues permits for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within 2 miles of an airport runway, and authorizes helicopter landing sites at/near schools.

Local Policy & Regulations

Tulare County Environmental Health Division

"The mission of the Division of Environmental Health is to enhance the quality of life in Tulare County through implementation of environmental health programs that protect public health and safety as well as the environment. We accomplish this goal by overseeing and enforcing numerous different programs, from food facility inspections to hazardous waste. All of our inspectors are licensed and/or certified in the field that they practice in and participate in continuing education to maintain licensure."[18]

Hazardous Materials/Certified Unified Program Agency (CUPA)

[18] Tulare County Health and Human Services Agency, 2018. Environmental Health Division. Who Are We. Accessed July 2021 at: https://tularecountyeh.org/eh/index.cfm/about-us/who-are-we/

"The California Environmental Protection Agency designated the Tulare County Environmental Health as the CUPA for Tulare County. The role of the CUPA is to assure consolidation, consistency and coordination of the hazardous materials programs within the County".[19]

"The Tulare County Division of Environmental Health is responsible for overseeing the six hazardous materials programs in the County. The Tulare County Division of Environmental Health is responsible for inspecting facilities that handle hazardous materials, generate hazardous waste, treat hazardous waste, own/operate underground storage tanks, own/operate aboveground petroleum storage tanks, or handle other materials subject to the California Accidental Release Program."[20]

Tulare County/Operational Area Emergency Operations Plan

"The Tulare County Office of Emergency Services (OES) is Tulare County's comprehensive emergency management program. The discipline of emergency management aims to create partnerships, plans, and systems to build capabilities and coordinate the efforts of government, industry, and voluntary organizations in all phases of an emergency.

The activities of Tulare County OES can be categorized under the four phases of the emergency management cycle: Preparedness, Response, Recovery, and Mitigation. The day-to-day activities of the program center around Preparedness and Mitigation phases, in order to combat potential hazards and minimize community impacts during the Response and Recovery phases. The following descriptions offer more detail about the activities in each phase of emergency management.

Preparedness

- Public Education
- Training & Exercise for responders
- Grants for public safety & health agencies

Response

Tulare County OES maintains the Emergency Operations Center (EOC) for the County and Operational Area. Tulare County OES also administers the AlertTC notification system and WebEOC crisis information management system.

[19] Tulare County Health and Human Services Agency, 2018. Hazardous Materials (CUPA) Hazardous Materials/Certified Unified Program Agency (CUPA). Accessed July 2021 at: https://tularecountyeh.org/eh/index.cfm/our-services/hazardous-materials-cupa/
[20] Ibid.

Recovery

After the emergency is over, there is still considerable work to be done to help the community return to a pre-disaster state. Recovery often takes several years, perhaps even decades, to fully complete.

Mitigation

Mitigation is the process by which hazards and vulnerabilities are identified, and measures taken to decrease the potential for occurrence of the hazard, the vulnerability to the hazard should it occur, or both. Tulare County Office of Emergency Services implements the 2011 Tulare County Hazard Mitigation Plan."[21]

Multi-Jurisdictional Local Hazard Mitigation Plan

Tulare County has prepared the 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) to assess the natural, technological, and human-caused risks to County communities, to reduce the potential impact of the hazards by creating mitigation strategies. The 2017 MJLHMP represents the County's commitment to create a safer, more resilient community by taking actions to reduce risk and by committing resources to lessen the effects of hazards on the people and property of the County.[22] The MJLHMP was adopted in March 2018.

Tulare County Fire Department

"The Emergency Services Division consists of over 400 career fire officers and Extra Help Paid On-Call personnel who provide services 24 hours per day, seven days a week, year round from 27 community based fire stations. Tulare County Fire Department (TCFD) personnel respond to approximately 12,000 calls for service each year.

Services are provided to unincorporated communities, hamlets, and rural areas. Contract Fire Protection Services are provided to the City of Exeter and The Strathmore Fire Protection District. TCFD participates in the Statewide Mutual Aid system and maintains reciprocal agreements with local response organizations including incorporated Cities, neighboring Counties, and State & Federal Wildland agencies.

TCFD provides response to virtually every conceivable type of emergency situation. The "All Risk" emergency response functions include: Fire Suppression-Structural, Wildland, Vehicle; Agricultural and other type fires; Emergency Medical Services-Life Threatening and Emergency Medical Assists; Traffic and Industrial Accidents; Rescue-Water Rescue, Trench Rescue,

[21] 2011 Tulare County Hazard Mitigation Plan. Accessed July 2021 at: http://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/.
[22] Tulare County 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP). March 2018. Page 1. Accessed July 2021 at: http://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/.

Structural Collapse, Rope Rescue; Hazardous Conditions-Flammable/Chemical Spills & Leaks, Electrical & Flood & Severe Weather emergencies."[23]

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

HS-4.1 Hazardous Materials - The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.

HS-4.3 Incompatible Land Uses - The County shall prevent incompatible land uses near properties that produce or store hazardous waste.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-4.6 Pesticide Control - The County shall monitor studies of pesticide use and the effects of pesticide on residents and wildlife and require mitigation of the effects wherever feasible and appropriate.

ERM-3.1 Environmental Contamination - All mining operations in the County shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site.

IMPACT EVALUATION

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Project Impact Analysis: ***No Impact***

The two communities of Cutler and Orosi are predominantly rural, agriculturally related service centers. They not only serve as an area where agriculturally-oriented enterprises, such as packing houses and cold storage facilities are located, but also as a residential community where many of the areas farm workers reside. As noted earlier, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that

[23] Tulare County Fire Department, 2018. Emergency Services. Accessed July 2021 at: http://tularecounty.ca.gov/fire/index.cfm/services/emergency-services/.

is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

Moreover, new development (or redevelopment) in the Project area would typically involve the routine management of some hazardous materials that could pose a significant threat to human health or the environment if not properly managed or if accidently released. During construction, this would include the use of fuels, lubricants, and other potential hazardous materials typically associated with heavy construction equipment. During operation, it is anticipated that small quantities of cleaning, maintenance, and landscaping chemicals would be used and stored in nearly all buildings developed under the Community Plan, and industrial uses, even under the performance standards contained in the Community Plan, may potentially use additional types of hazardous materials.

The routine storage, use, handling, generation, transport, and disposal of hazardous materials during site construction and operation activities are addressed by federal, state, and local laws, regulations, and programs, including the Resource Conservation and Recovery Act, the Toxic Substances Control Act, DOT regulations in 49 CFR, and hazardous materials regulations in CCR Title 26 at the federal and state levels. Cal/OSHA is responsible for developing and enforcing workplace safety standards, including the handling and use of hazardous materials. At the local level construction and operation-related activities of facilities will comply with the California fire code, local building codes (including requirements for fire suppression systems), and gas pipeline regulations. The Tulare County Fire Department will be responsible for enforcing provisions of the fire code. The California Public Utilities Code regulates the safety of gas transmission pipelines.

Based on this analysis, the future use of large quantities of hazardous materials, will be evaluated for compatibility with surrounding areas on a case-by-case basis and all hazardous materials will be properly handled in accordance with applicable regulations. As such, there will be ***No Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

Cumulative development throughout the Project area and its vicinity, under Year 2030 build out conditions will cumulatively increase the potential for exposure to existing hazards associated with State Route 63. However, as discussed earlier, the transportation of hazardous materials will continue to be regulated by federal, state, and regional agencies, and all new development will be subject to independent environmental review and all applicable regulations to minimize any potential health risks associated with freeways. Therefore,

through appropriate regulations, potential cumulative health impacts associated with the build out of the Project area would result in ***No Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

No Project-specific and Cumulative Impact related to this Checklist Item will occur through the Year 2030 Planning horizon.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Project Impact Analysis: ***No Impact***

there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The proposed Project will not involve any hazards or hazardous materials. All new development will be subject to independent environmental review and all applicable regulations to minimize any potential health risks. Therefore, through applicable regulations, potential cumulative health impacts associated with future development within the Project area would result in ***No Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

With no Project-specific impact, ***No Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

No Project-specific impacts related to this Checklist Item will be occur through the Year 2030 Planning Horizon. Therefore, ***No Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Project Impact Analysis: ***No Impact***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. "The Cutler-Orosi Community Plan Area is within the Cutler-Orosi Joint Unified School District located within its boundaries. It offers pre-school through 12th grade education and has a 2019-2020 enrollment of 4,123 students."[24] As previously discussed, future developments will be evaluated on a case-by-case basis and all hazardous materials will be properly handled in accordance with applicable regulations. Therefore, ***No Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Project Impact Analysis: ***No Impact***

24 Cutler-Orosi Community Plan 2019 Update. Page 86.

there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The proposed Project will not involve any hazards or hazardous materials. As indicated earlier, according to the DTSC's EnviroStor information, there is one open site on assessment status and one site with a cleanup status shown as active. The Parmenter and Bryan located at 13133 Avenue 416 in Orosi shows a cleanup status as active as of July 2018, and Marroquin Property located at 12589 Avenue 416 in Orosi shows a cleanup status as open-site assessment. Therefore, ***No Project-specific Impact*** related to this Checklist Item will also occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less-Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

The proposed Project will not cause other properties to be included in the Cortese List. ***No Cumulative Impact*** will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, the Parmenter and Bryan located at 13133 Avenue 416 in Orosi shows a cleanup status as active as of July 2018, and Marroquin Property located at 12589 Avenue 416 in Orosi shows a cleanup status as open-site assessment. As such, ***No Project-specific and Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Project Impact Analysis: ***No Impact***

The Project is not located within an airport land use plan, it is not located within two miles of a public airport or public use airport, and, as such, the Project would not result in a safety hazard for people residing or working in the project area.

The proposed project area is not located within two miles of any public use airports. Therefore, ***No Program - specific Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

No Cumulative Impact will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Project Impact Analysis: ***No Impact***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. "Tulare County has in place an emergency plan to cope with natural disasters that are statewide or happen locally."[25]

"In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities."[26] Compliance with applicable standards, rules, regulations, requirements, etc., would result in ***No Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

[25] TCAG Regional Transportation Plan, Page 1-11.
[26] General Plan Background Report. Page 8-35 to 8-36.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

The proposed Project does not include alterations to an emergency plan and there is sufficient access for emergency vehicles. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Project Impact Analysis: ***No Impact***

As the proposed Project is located outside of any wildland areas, the proposed Project area will not result in any exposure to people or structures to a significant risk of loss, injury or death from wildland fires. ***No Project-specific Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

The Project area in not located in a wildland area and will not impact the status of wildlands. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

DEFINITIONS/ACRONYMS

Definitions

Hazardous Waste Generators - "Hazardous waste generators can be classified in three groups depending on the quantity of waste generated in any month. A Conditionally Exempt Small Quantity Generator (CESQG) is defined in regulation as a generator of less than 100 kilograms of hazardous waste in a calendar month. A Small Quantity Generator (SQG) is a generator of greater than 100 kg and less than 1000 kg of hazardous waste in a calendar month. A Large Quantity Generator (LQG) generates greater than 1000 kg of hazardous waste in a calendar month. Determination of whether a facility is a CESQG, SQG, or LQG is the responsibility of the generator. The designation may change during the year, based on the quantity of hazardous waste produced during a particular month. Specific hazardous waste materials may also be exempt from the monthly total quantity. Therefore, the Certified Unified Program Agencies (CUPA) cannot authoritatively designate the number of generators within each of the above categories."[27]

Small Quantity Generators - "CUPA has designated 58 active and 30 inactive small quantity generators (SQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive SQG's during calendar year 2002 were 121.7 and 56.3 tons, respectively."[28]

Large Hazardous Waste Producers - "CUPA has designated 23 active and 3 inactive large quantity generators (LQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive LQG's during calendar year 2002 were 559.7 and 121.6 tons, respectively."[29]

Storage Facilities - "According to available information from the agencies (Department of Toxic Substances Control [DTSC] and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the storage of hazardous waste in Tulare County."[30]

Disposal Facilities - "According to available information from the agencies (DTSC and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the disposal of hazardous waste in Tulare County."[31]

Planned Treatment, Storage and Disposal Facilities - "According to information available to the CUPA, there are no new treatment, storage and disposal facilities proposed in Tulare County."[32]

[27] General Plan Background Report. Pages 8-28 and 8-29.
[28] Ibid.
[29] Op. Cit.
[30] Op. Cit.
[31] Op. Cit.
[32] Op. Cit.

ACRONYMS

CDF/CalFire	California Department of Forestry
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DOE	Department of Energy
DTSC	Cal/EPA Department of Toxic Substance Control
HMTA	Hazardous Materials Transportation Act of 1975
HWMP	Hazardous Waste Management Program
HWTS	Hazardous Waste Tracking System
LUST	Leaking Underground Tank
NCP	National Contingency Plan
SARA	Superfund Amendments and Reauthorization Act
USFS	United States Forest Service

REFERENCES

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Hydrology and Water Quality
Chapter 3.10

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impact*** (including some mitigation in the form recommendations) related to Hydrology and Water Quality through the Year 2030 Planning horizon. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the analysis as follows.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hydrology and Water Quality. As required in Section 15126, all phases of the proposed Project will be considered was part of the potential environmental impact.

As noted in 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area, as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas)

as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Hydrology and Water Quality in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, the Tulare County General Plan 2030 Update Background Report and/or the Tulare County General Plan 2030 Update Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA checklist item questions. The thresholds of significance for this section includes the following:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, in a manner which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- In flood hazard, tsunami, seiche zones, risk release of pollutants due to project inundation.

ENVIRONMENTAL SETTING

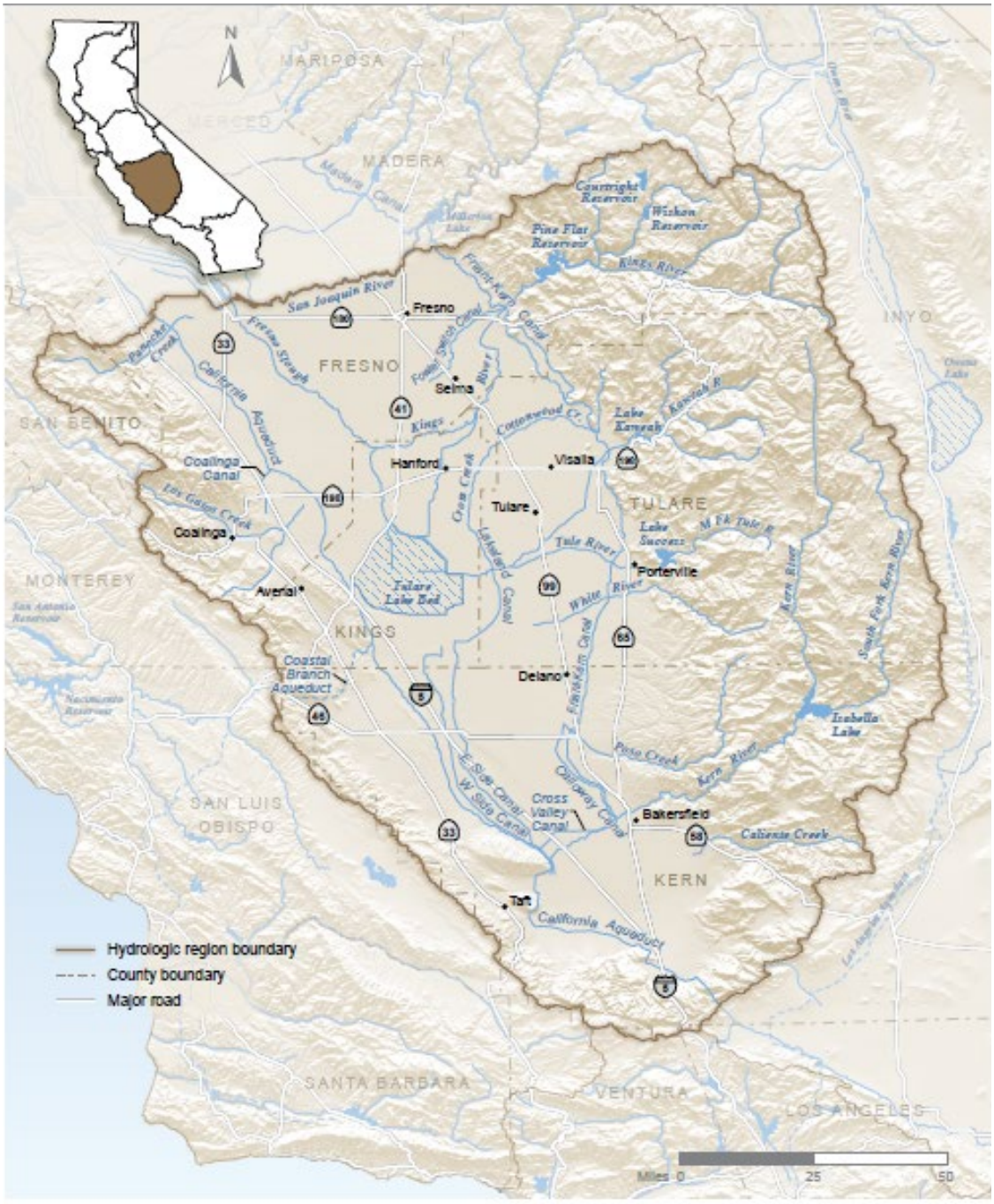
"The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,050 square miles) and includes all of Kings and Tulare counties and most of Fresno and Kern counties (Figure TL-1 [**Figure 3.10-1** of this EIR]). The San Joaquin Valley is divided into the San Joaquin River and the Tule Lake regions by the San Joaquin River with the Tulare Lake region in the southern portion. Historically, the valley floor in this region had been a complex series of interconnecting natural sloughs, canals, and marshes.

The economic development of the region is closely linked to the surface water and groundwater resources of the Tulare Lake region. Major rivers draining into the Tulare Lake region include the Kings, Kaweah, Tule, and Kern rivers. The original ecological character of the area has been changed dramatically, largely from the taming of local rivers for farming. In the southern portion of the region, significant geographic features include the lakebeds of the former Buena Vista/Kern

[1] 2013 CEQA Guidelines. Section 15126.2 (a).

and Tulare lakes, comprising the southern half of the region; the Coast Ranges to the west; the Tehachapi Mountains to the south; and the southern Sierra Nevada to the east.

Figure 3.10-1
Watershed Map



The Tulare Lake region is one of the nation's leading agricultural production areas, growing a wide variety of crops on about 3 million irrigated acres. Agricultural production has been a mainstay of the region since the late 1800s. However, since the mid-1980s, other economic sectors, particularly the service sector, have been growing"[2]

The Tulare Lake Hydrologic Region has both watershed areas (surface water) and groundwater sub basin areas (see **Figure 3.10-2**[3]).

Watershed (Surface Water)

"The Tulare Lake region is divided into several main hydrologic subareas: the alluvial fans from the Sierra foothills and the basin subarea (in the vicinity of the Kings, Kaweah, and Tule rivers and their distributaries); the Tulare Lake bed; and the southwestern uplands. The alluvial fan/basin subarea is characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey surface water originating from the Sierra Nevada. The dominant hydrologic features in the alluvial fan/basin subarea are the Kings, Kaweah, Tule, and Kern rivers and their major distributaries from the western flanks of the Sierra. Los Gatos Creek is the one substantial creek entering from the Coast Ranges, flowing southeast. The largest river in terms of runoff is the Kings River, which originates high in Kings Canyon National Park and generally trends southwest into Pine Flat Lake. Downstream of Pine Flat Dam, the river flows south and west toward Tulare Lake. During flood release events from Pine Flat Reservoir, the majority of the Kings River flow is diverted northwest into the Fresno Slough/James Bypass system (along the historically high-water outlet of Tulare Lake), emptying first into the Mendota Pool, and from there, into the San Joaquin River. The Kaweah River begins in Sequoia National Park, flows west and southwest, and is impounded by Terminus Dam. It subsequently spreads into many distributaries around Visalia and Tulare trending toward Tulare Lake. The Tule River begins in Sequoia National Forest and flows southwest through Lake Success toward Tulare Lake."[4]

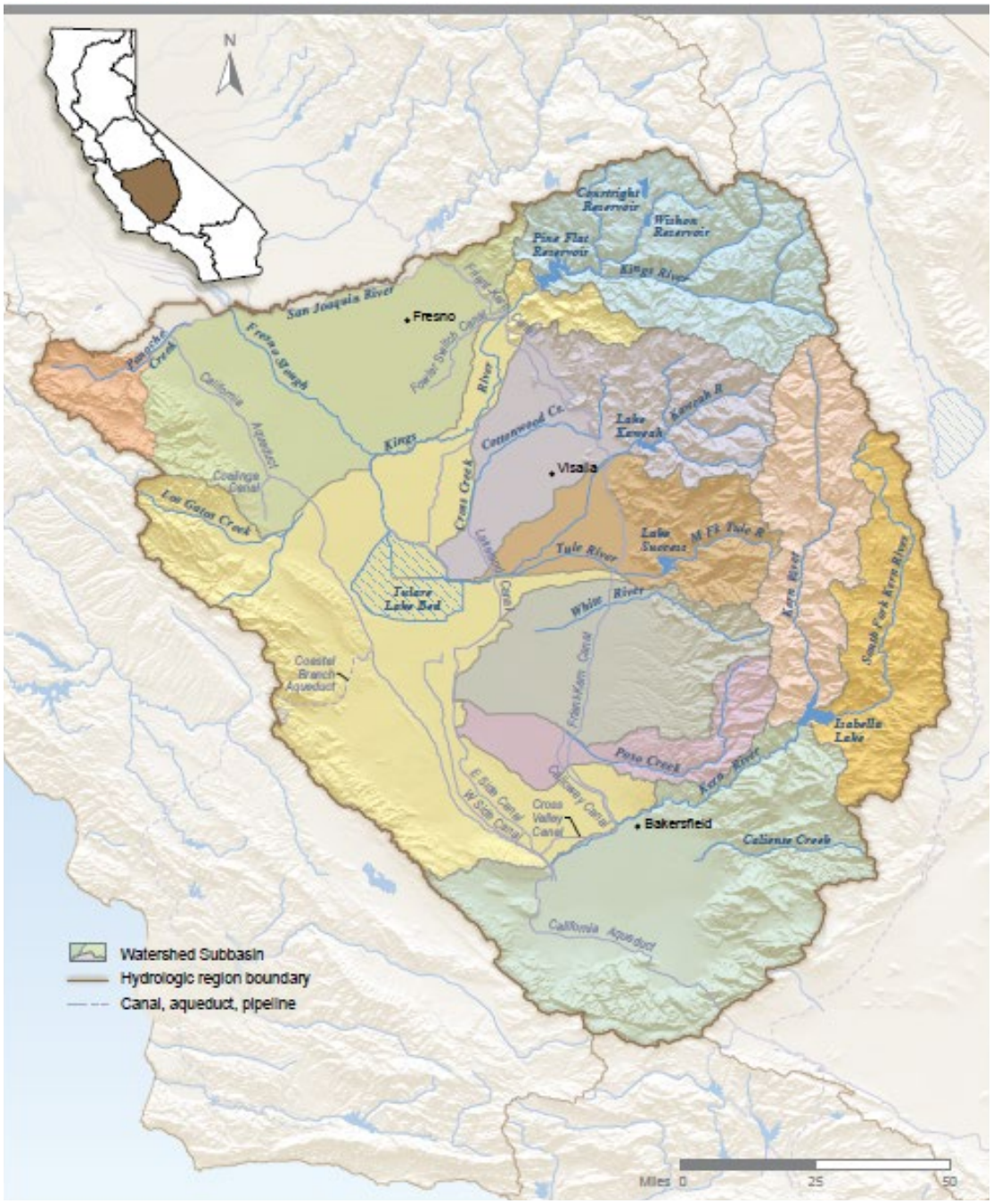
"Surface water from the Tulare Lake Basin only drains north into the San Joaquin River in years of extreme rainfall. This essentially closed basin is situated in the topographic horseshoe formed by the Diablo and Temblor Ranges on the west, by the San Emigdio and Tehachapi Mountains on the south, and by the Sierra Nevada Mountains on the east and southeast.

The Basin encompasses approximately 10.5 million acres, of which approximately 3.25 million acres are in federal ownership. Kings Canyon and Sequoia National Parks and substantial portions of Sierra, Sequoia, Inyo, and Los Padres National Forests are included in the Basin. Valley floor lands (i.e., those having a land slope of less than 200 feet per mile) make up slightly less than one-half of the total basin land area. The maximum length and width of the Basin are about 170 miles and 140 miles, respectively. The valley floor is approximately 40 miles in width near its southern end, widening to a maximum of 90 miles near the Kaweah River.

[2] California Department of Water Resources. California Water Plan Update 2013. Tulare Lake Hydrologic Region. Page TL-11 and TL-13..
[3] Ibid. TL-14.
[4] California Department of Water Resources. California Water Plan Update 2013. Tulare Lake Hydrologic Region. Page TL-13.

Urban development is generally confined to the foothill and eastern valley floor areas. Major concentrations of population occur in or near the metropolitan areas of Bakersfield, Fresno, Porterville, Hanford, Tulare, and Visalia.

Figure 3.10-2
Tulare Lake Hydrologic Region Watersheds



The Basin is one of the most important agricultural centers of the world. Industries related to agriculture, such as food processing and packaging (including canning, drying, and wine making), are prominent throughout the area. Producing and refining petroleum lead non-agricultural industries in economic importance.

Surface water supplies tributary to or imported for use within the Basin are inadequate to support the present level of agricultural and other development. Therefore, ground water resources within the valley are being mined to provide additional water to supply demands. Water produced in extraction of crude oil is used extensively to supplement agricultural irrigation supply in the Kern River sub-basin."[5]

Surface Water Quality

"Surface water quality in the Basin is generally good, with excellent quality exhibited by most eastside streams. The Regional Water Board intends to maintain this quality."[6] "As new information becomes available, the Regional Water Board will review the appropriateness of these objectives, and may modify them accordingly."[7] Specific objectives outlined in the Water Quality Control Plan are listed below:

- **"Ammonia:** Waters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/l (as N) in receiving waters.
- **Bacteria:** In waters designated REC-1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml
- **Biostimulatory Substances:** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses."[8]
- **"Chemical Constituents:** Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses."[9]
- **"Color:** Waters shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
- **Dissolved Oxygen:** Waste discharges shall not cause the monthly median dissolved oxygen concentrations (DO) in the main water mass (at centroid of flow) of streams and

[5] Regional Water Quality Control Board, Central Valley Region. Water Quality Control Plan for the Tulare Lake Basin. Revised July 2018). Page 1-1. Accessed July 2021 at: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/tlbp_201805.pdf.
[6] Ibid. 3-2.
[7] Op. Cit. 3-3.
[8] Op. Cit.
[9] Op. Cit. 3-4.

above the thermocline in lakes to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration." [10]

- **"Floating Material:** Waters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
- **Oil and Grease:** Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- **pH:** The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH. In determining compliance with the above limits, the Regional Water Board may prescribe appropriate averaging periods provided that beneficial uses will be fully protected.
- **Pesticides:** Waters shall not contain pesticides in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses." [11]
- **"Radioactivity:** Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or which result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life." [12]
- **"Salinity:** Waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use of the water resources." [13]
- **"Sediment:** The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- **Settleable Material:** Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- **Suspended Material:** Waters shall not contain suspended material in concentration that cause nuisance or adversely affect beneficial uses.
- **Tastes and Odors:** Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.
- **Temperature:** Natural temperatures of waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses." [14]

[10] Op. Cit.
[11] Op. Cit. 3-5.
[12] Op. Cit. 3-6.
[13] Op. Cit. 3-7.
[14] Op. Cit. 3-8 and 3-9.

- **"Toxicity:** All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances." [15]
- **"Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses." [16]

Surface Water Supply

"Surface water supplies for the Tulare Lake Basin include developed supplies from the [Central Valley Project] CVP, the [State Water Project] SWP, rivers, and local projects. Surface water also includes the supplies for required environmental flows. Required environmental flows are comprised of undeveloped supplies designated for wild and scenic rivers, supplies used for instream flow requirements, and supplies used for Bay-Delta water quality and outflow requirements. Finally, surface water includes supplies available for reapplication downstream. Urban wastewater discharges and agricultural return flows, if beneficially used downstream, are examples of reapplied surface water."[17]

"The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, are of excellent quality and provide the bulk of the surface water supply native to the Basin. Imported surface supplies, which are also of good quality, enter the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta-Mendota Canal. Adequate control to protect the quality of these resources is essential, as imported surface water supplies contribute nearly half the increase of salts occurring within the Basin.

Buena Vista Lake and Tulare Lake, natural depressions on the valley floor, receive flood water from the major rivers during times of heavy runoff. During extremely heavy runoff, flood flows in the Kings River reach the San Joaquin River as surface outflow through the Fresno Slough. These flood flows represent the only significant outflows from the Basin.

Besides the main rivers, the basin also contains numerous mountain streams. These streams have been administratively divided into eastside streams and westside streams using Highway 58 from Bakersfield to Tehachapi. Streams from the Tehachapi and San Emigdio Mountains are grouped with westside streams. In contrast to eastside streams, which are fed by Sierra snowmelt and springs from granitic bedrock, westside streams derive from marine sediments and are highly mineralized, and intermittent, with sustained flows only after extended wet periods.[18]"

Groundwater Aquifers and Wells

"Groundwater resources in the Tulare Lake region are supplied by both alluvial and fractured rock

[15] Op. Cit. 3-9.
[16] Op. Cit.
[17] Tulare County General Plan 2030 Update. Background Report. Page 10-7.
[18] Regional Water Quality Control Board. Central Valley Region. Water Quality Control Plan for the Tulare Lake Basin. Revised July 2018. Page 1-2.

aquifers. Alluvial aquifers are composed of sand and gravel or finer grained sediments, with groundwater stored within the voids, or pore space, between the alluvial sediments. Fracturedrock aquifers consist of impermeable granitic, metamorphic, volcanic, and hard sedimentary rocks, with groundwater being stored within cracks, fractures, or other void spaces. The distribution and extent of alluvial and fractured-rock aquifers and water wells vary significantly within the region. A brief description of the aquifers for the region is provided below. Alluvial Aquifers

Alluvial Aquifers

"The Tulare Lake Hydrologic Region contains 12 groundwater basins and 7 subbasins recognized in California Department of Water Resources (DWR) Bulletin 18-2003 (California Department of Water Resources 2003) and underlie approximately 8,400 square miles, or about 50 percent of the region. The majority of the groundwater in the region is stored in alluvial aquifers. Figure TL-3 shows the location of the alluvial groundwater basins and subbasins and Table TL-1 lists the associated names and numbers. Pumping from the alluvial aquifers in the region accounts for about 38 percent of California's total average annual groundwater extraction. The most heavily used groundwater basins in the region include Kings, Westside, Kaweah, Tulare Lake, Tule, and Kern County. These basins account for approximately 98 percent of the average 6.3 million acrefeet (maf) of groundwater pumped annually during the 2005-2010 period. Groundwater wells in the San Joaquin Valley extend to depths of more than 1,000 feet (Page 1986). Based on a series of irrigation pump tests, groundwater pumping rates in the various subbasins were determined to range from about 650 gallons per minute (gpm) to about 1,650 gpm (Burt 2011)."[19]

"Water agencies in the Tulare Lake region have been practicing conjunctive use for many years to manage groundwater and assist dry year supplies. Groundwater recharge is primarily from rivers and natural streambeds, irrigation water percolating below the root zone of irrigated fields, direct recharge from developed ponding basins and water banks, and in-lieu recharge where surface water is made available in-lieu of groundwater pumping. Some water agencies accomplish recharge by directing available water into existing natural streambeds and sloughs, and others encourage application of water, when available, on farmed fields. The Deer Creek and Tule River Authority provides an example of how groundwater management activities can be coordinated with other resources. The authority, in conjunction with the US Bureau of Reclamation, has constructed more than 200 acres of recharge basins as part of its Deer Creek Recharge-Wildlife Enhancement Project. When available, the project takes surplus water during winter months and delivers it to the basins, which serve as winter habitat for migrating waterfowl, creating a significant environmental benefit. Most of the water also recharges into the underlying aquifer, thereby benefiting the local groundwater system."[20]

<u>Groundwater Quality</u>

Specific objectives outlined in the Water Quality Control Plan are listed below: [21]

[19] California Water Plan Update 2013. Tulare Lake. Pages TL-13 and TL-16.

[20] Ibid. TL-10.

[21] Regional Water Quality Control Board. Central Valley Region. Water Quality Control Plan for the Tulare Lake Basin. Revised July 2018. Page 3-10 to 3-12.

- **Bacteria:** In ground waters designated MUN, the concentration of total coliform organisms over any 7-day period shall be less than 2.2/100 ml.
- **Chemical Constituents:** Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Pesticides:** No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in ground waters in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.
- **Salinity:** All ground waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use and management of water resources.
- **Tastes and Odors:** Ground waters shall not contain taste- or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- **Toxicity:** Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s).

According to the California Water Plan, the key ground water quality issues include the following.[22]

- **Salinity:** Salinity is the primary contaminant affecting water quality and habitat in the Tulare Lake region. Because the groundwater basin in the San Joaquin Valley portion of the region is an internally drained and closed basin, salts, much of which are introduced into the basin with imported water supplies, build up in the soil and groundwater. Salt contained in the imported water supply is the primary source of salt circulating in the Tulare Lake region. The California Aqueduct, Friant-Kern Canal, and to a less extent Delta Mendota Canal supply most of the higher quality surface irrigation water in the Tulare Lake region. The quality of this supply may be impaired by the recirculation of salts from the San Joaquin River to the Delta Mendota Canal intake pump, leading to a greater net accumulation of salts in the basin. Delivery data from the two major water projects in California indicate there is a substantial amount of salt being transported from the Delta to other basins throughout the state. Annual import of salt into the Tulare Lake region is estimated to be 1,206 thousand tons of salt. In situ dissolution of salts and pumping from the underlying confined aquifer are important secondary sources.

- **Sedimentation and Erosion:** In the Central Valley, erosion is occurring from the headwaters down to the valley floor. Although naturally occurring, erosion can be accelerated by timber harvest activities, land use conversion, rural development, and grazing. Excessive soil erosion and sediment delivery can impact the beneficial uses of water by (1) silting over fish spawning habitats; (2) clogging drinking water intakes; (3)

[22] California Water Plan Update 2009. Tulare Lake. Page TL-22 to TL-24.

filling in pools creating shallower, wider, and warmer streams and increasing downstream flooding; (4) creating unstable stream channels; and (5) losing riparian habitat. Timber harvesting in the riparian zone can adversely affect stream temperatures by removing stream shading, a concern for spawning and rearing habitat for salmonids. Thousands of miles of streams are potentially impacted, and the lack of resources has prevented a systematic evaluation of these impacts.

- **Nitrates and Groundwater Contaminates:** Groundwater is a primary water supply, but in many places it is impaired or threatened because of elevated levels of nitrates and salts that are derived principally from irrigated agriculture, dairies, discharges of wastewater to land, and from disposal of sewage from both community wastewater systems and septic tanks. As population has grown, many cities have struggled to fund improvements in wastewater systems. High TDS content of west-side water is due to recharge of streamflow originating from marine sediments in the Coast Range.

Naturally occurring arsenic and human-made organic chemicals—pesticides and industrial chemicals—in some instances have contaminated groundwater that is used as domestic water supplies in this region. In some cases, nitrates are from natural sources. Agricultural pesticides and herbicides have been detected throughout the Central Valley, but primarily along the east side where soil permeability is higher and depth to groundwater is shallower. The most notable agricultural contaminant is DBCP, a now-banned soil fumigant and known carcinogen once used extensively on grapes.

Groundwater Supply

"Surface water supplies tributary to or imported for use within the Basin are inadequate to support the present level of agricultural and other development. Therefore, ground water resources within the valley are being mined to provide additional water to supply demands. Water produced in extraction of crude oil is used extensively to supplement agricultural irrigation supply in the Kern River sub-basin."[23]

"Tulare Lake region's groundwater use rises and falls contingent on the availability of both local and imported surface supplies. The management of water resources within this region is a complex activity and critical to the region's agricultural operations. Local annual surface supplies are determined by the amount of runoff from the Sierra Nevada watersheds, the flows captured in local reservoirs, and carryover storage over a series of years. Imported surface supply availability is contingent not only on runoff in any year or series of years but also by regulations determining the amount of water that can be pumped month to month from the Sacramento-San Joaquin River Delta due to fishery and other concerns. The recent San Joaquin River settlement will reduce the overall volume of water available for diversion into the Friant-Kern Canal. The new biological opinion on the Operating Criteria and Plan (OCAP) for the SWP and CVP will impact surface water supplies to south-of-Delta water users."[24]

[23] Regional Water Quality Control Board. Central Valley Region. Water Quality Control Plan for the Tulare Lake Basin. Revised July 2018. Page 1-2.
[24] California Water Plan Update 2009. Tulare Lake. Page TL-15 to TL-17.

"Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath its western portion. Extensive alluvial fans associated with the Kings, Kaweah, and Tule Rivers provide highly permeable areas in which groundwater in the unconfined aquifer system is readily replenished. Interfan areas between the streams contain less permeable surface soils and subsurface deposits, impeding groundwater recharge and causing well yields to be relatively low. The mineral quality of groundwater in Tulare County is generally satisfactory for all uses."[25] "Groundwater recharge is primarily from natural streams, other water added to streambeds, from deep percolation of applied irrigation water, and from impoundment of surface water in developed water bank/percolation ponds."[26]

"The Tulare Lake region has experienced water-short conditions for more than 100 years, which has resulted in a water industry that has consciously developed—through careful planning, management and facility design—the possibility of a shortage occurring in any year. Water demand is more or less controlled by available, reliable long-term water supplies. Over the years, agricultural acreage has risen and dropped largely based on water supplies. The region initially developed with surface water supplies; but local water users learned these supplies could widely vary in volume from year to year and drought conditions could quickly develop. The introduction of deep well turbines resulted in a dramatic rise in groundwater use in the early 1900s, subsequently resulting in dropping groundwater levels and land subsidence. Surface water storage and conveyance systems built to alleviate the overuse of groundwater provided an impounded supply of water that could be used during years with deficient surface water. This resulted in a regional reliance on conjunctive water use in the development of the local water economy. Efforts to address Delta environmental issues and the subsequent loss of surface water to the region is increasing groundwater use and creating concern that additional pumping will increase subsidence."[27]

"Groundwater overdraft is expected to decline statewide by 2020. The reduction in irrigated acreage in drainage problem areas on the west side of the San Joaquin Valley is expected to reduce groundwater demands in the Tulare Lake region by 2020."[28]

As indicated in the 2013 California Water Plan, "California's water resources vary significantly from year to year. Ten recent years show this variability for water use and water supply. Applied Water Use shows how water is applied to urban and agricultural sectors and dedicated to the environment and the Dedicated and Developed Water Supply shows where the water came from each year to meet those uses. Dedicated and Developed Water Supply does not include the approximately 125 million acre-feet (MAF) of statewide precipitation and inflow in an average year that either evaporates, are used by native vegetation, provides rainfall for agriculture and managed wetlands, or flow out of the state or to salt sinks like saline aquifers (see Table TL-23). Groundwater extraction includes annually about 2 MAF more groundwater used statewide than

[25] Tulare County General Plan 2030 Update. Background Report. Page 10-11.
[26] California Water Plan Update 2009. Tulare Lake. Page TL-17.
[27] Ibid. TL-19.
[28] Tulare County General Plan 2030 Update. Background Report. Page 10-11.

what naturally recharges – called groundwater overdraft. Overdraft is characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years."[29]

According to the *2013 California Water Plan*, "Tulare Lake Hydrologic Region consists of 10 planning areas. Table TL-23 [in the 2013 California Water Plan, **Table 3.10-1** in this Draft EIR] provides a hydrologic water balance summary for the Tulare Lake region. Figure TL-15 [in the 2013 California Water Plan] illustrates a water balance for dedicated and developed supply by year. For more information on the water balances and portfolios, go to Volume 5, The Technical Guide."[30]

Table 3.10-1
Tulare Lake Hydrologic Water Balance for 1998-2005 (thousand acre-feet)

	Water Year							
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
WATER ENTERING THE REGION								
Precipitation	12,317	11,964	16,939	17,165	7,031	10,724	9,945	16,185
Inflow from Oregon/Mexico	0	0	0	0	0	0	0	0
Inflow from Colorado River	0	0	0	0	0	0	0	0
Imports from Other Regions	5,174	4,816	5,909	5,944	4,434	2,797	2,704	4,456
Total	**17,311**	**16,780**	**22,848**	**23,079**	**11,465**	**13,521**	**12,649**	**20,641**
WATER LEAVING THE REGION								
Consumptive Use of Applied Water (Ag, M&I, Wetlands)	7,667	8,221	6,953	7,376	8,214	8,592	8,684	7,668
Outflow to Oregon/Nevada/Mexico	0	0	0	0	0	0	0	0
Exports to Other Regions	1,898	1,961	1,724	2,269	2,053	1,215	1,204	1,502
Statutory Required Outflow to Salt Sink	0	0	0	0	0	0	0	0
Additional Outflow to Salt Sink	458	457	300	468	456	514	456	456
Evaporation, Evapotranspiration of Native Vegetation, Groundwater Subsurface Outflows, Natural and Incidental Runoff, Ag Effective Precipitation & Other Outflows	10,090	10,342	10,297	13,241	53,03	85,28	7,667	13,095
Total	**20,113**	**20,981**	**22,274**	**23,350**	**16,026**	**18,849**	**18,011**	**22,721**
CHANGE IN SUPPLY: [+] Water added to storage [-] Water removed from storage								
Surface Reservoirs	173	-199	680	-108	-473	-59	101	259
Groundwater[b]	-2,957	-4,002	-106	-163	-4,088	-5,269	-5,463	-2,339
Total	**-2,802**	**4,201**	**574**	**-271**	**-4,561**	**-5,328**	**-5,362**	**-2,080**
Applied Water[a] (ag, urban, wetlands) (compare with consumptive use)	**11,343**	**11,977**	**10,731**	**11,347**	**12,036**	**12,310**	**12,470**	**11,408**

Notes: taf = thousand acre-feet, M&I = municipal and industrial

[a] *Definition: Consumptive use is the amount of applied water used and no longer available as a source of supply. Applied water is greater than consumptive use because it includes consumptive use, reuse, and outflows.*

[b] *Definition: Change in Supply: Groundwater – The difference between water extracted from and water recharged into groundwater basins in a region. All regions and years were calculated using the following equation: change in supply: groundwater = intentional recharge + deep percolation of applied water + conveyance deep percolation and seepage - withdrawals.*

This equation does not include unknown factors such as natural recharge and subsurface inflow and outflow. For further details, refer to

[29] California Water Plan Update 2013. Tulare Lake. Page TL-56. https://cawaterlibrary.net/document/california-water-plan-2013-tulare-lake-hydrologic-region-report /

[30] Ibid. TL-52.

Table 3.10-1 Tulare Lake Hydrologic Water Balance for 1998-2005 (thousand acre-feet)								
	Water Year							
	2003	2004	2005	2006	2007	2008	2009	2010
Volume 4, Reference Guide, the article "California's Groundwater Update 2013" and Volume 5, Technical Guide.								
Source: California Water Plan Update 2013, Tulare Lake, Department of Water Resources								

"There are 19 entities in Tulare County with active programs of groundwater management. These management programs include nearly all types of direct recharge of surface water. Groundwater recovery is accomplished primarily through privately owned wells. Among the larger programs of groundwater management are those administered by the Kaweah Delta Water Conservation District, the Kings River Water Conservation District, the Tulare Irrigation District, the Lower Tule Water Users Association, and the Alta Irrigation District, utilizing water from the Friant-Kern Canal and local streams. The Kings River Water Conservation District covers the western county."[31] **Table 3.10-2** lists irrigation districts located in Tulare County.

Table 3.10-2
Irrigation Districts in Tulare County[32]

Entity	Surface Water	Imported Water Source (in acre feet (af))	Groundwater Extraction (in acre feet (af))
Alpaugh Irrigation District	NA	Friant-Kern Canal (1,000 af average)	19,000
Alta Irrigation District	King River	Friant-Kern Canal (surplus)	230,000
Delano-Earlimart Irrigation District	NA	Friant-Kern Canal (146,050 af average)	8,000
Exeter Irrigation District	NA	Friant-Kern Canal (1,000 af average)	14,000
Hills Valley Irrigation District	NA	Cross Valley Canal (2,000 af average)	1,000
Ivanhoe Irrigation District	Kaweah River	Friant-Kern Canal (11,650 af average)	15,000
Kaweah Delta Water Cons. District	Kaweah River	Friant-Kern Canal (24,000 af average)	130,000
Kern-Tulare Water District	Kern River	Cross Valley Canal (41,000 af average)	33,000
Lindmore Irrigation District	NA	Friant-Kern Canal (44,000 af average)	28,000
Lower Tulare River Irrigation Dist.	Tule River	Friant-Kern Canal (180,200 af average) Cross Valley Canal (31,000 af average)	NA
Lindsay-Strathmore Irrigation District	NA	Friant-Kern Canal (24,150 af average)	NA
Orange Cove Irrigation District	NA	Friant-Kern Canal (39,200 af average)	30,000
Pioneer Water Irrigation District	Tule River		3,000
Pixley Irrigation District	NA	Friant-Kern Canal (1,700 af average) Cross Valley Canal (31,000 af average)	130,000
Porterville Irrigation District	Tule River	Friant-Kern Canal (31,000 af average)	15,000
Rag Gulch Water District	Kern River	Friant-Kern Canal (3,700 af average) Cross Valley Canal (13,300 af average)	
Saucelito Irrigation District	Tule River	Friant-Kern Canal (37,600 af average)	15,000
Stone Corral Irrigation District	NA	Friant-Kern Canal (10,000 af average)	5,000
Teapot Dome Irrigation District	NA	Friant-Kern Canal (5,600 af average)	
Terra Bella Irrigation District	NA	Friant-Kern Canal (29,000 af average)	2,000
Tulare Irrigation District	Kaweah River	Friant-Kern Canal (100,500 af average)	65,000

[31] Tulare County General Plan 2030 Update. Background Report. Page 10-12.
[32] Ibid. 10-14.

Source: Bookman-Edmonston Engineering Inc. Water Resources Management in the Southern San Joaquin Valley, Table A-1.

"The Tulare County Resource Management Agency maintains a list of special districts that provide sewer and/or water service that cannot currently meet the demand of new development projects. The list provided by Tulare County RMA (last updated April 30, 2007) indicates that following water and/or sewer districts are either under a temporary cease and desist order by the Regional Water Control Board prohibiting any new connections, or have other limitations for water and sewer connections:

- Alpaugh Joint Powers Authority Water District;
- Cutler Public Utility District;
- Delft Colony Zone of Benefit (County RMA);
- Earlimart Public Utility District;
- El Rancho Zone of Benefit (County RMA);
- Orosi Public Utility District;
- Pixley Public Utility District;
- Pratt Mutual Water Company;
- Richgrove Public Utility District;
- Seville Zone of Benefit (County RMA);
- Seville Water Company;
- Springville Public Utility District;
- Tooleville Zone of Benefit (County RMA);
- Traver Zone of Benefit (County RMA); and
- Wells Tract Zone of Benefit (County RMA)."[33]

"In order to determine if a local utility district will be able to serve a proposed development project, a "Will Serve Letter" is required to be submitted with the building permit application. This requirement establishes whether or not a permit can proceed early in the application process and avoid application denials several weeks into the permit approval process."[34]

Much of the County's land is rural in nature and requires the use of private wells. If a project utilizes water from an existing irrigation district, then the affected irrigation district is responsible for determining if the proposed Project could potentially create a significant impact related to water supply. An example of a potential impact could involve a need for a significant increase in the service levels of an irrigation district.

Cutler Public Utility District (CPUD)

"CPUD has a total of four developed wells. Two of the wells are active and two of the wells are inactive at this time **(see Figure 14)**. The two inactive wells (Well Nos. 3 and 4) were taken out of service because water test results exceeded the Maximum Contaminant Level (MCL) limit of

[33] Tulare County General Plan 2030 Update. Background Report. Page 7-33.
[34] Ibid. Page 7-34.

nitrates. Well Nos. 5 and 6 are the two active wells that supply water for the community."[35]

"There is a well within CPUD (Well No. 7) that is not owned by CPUD. The well is owned by the Tulare County Redevelopment Agency and is used for fire flow at a local industry. Well No. 8 was completed in April 2006. Water quality testing; however, has revealed high nitrate concentrations approaching the MCL. Future use of Wells No. 8 is uncertain. Well No. 9 was drilled on the site for a proposed blending tank facility for CPUD. The well facility, when completed, will allow for water from Well Nos. 3 and 4 to be used in combination with flows from Well No. 5 and Well No. 9. The availability of sufficient quantities of low nitrate concentration water from CPUD's wells is uncertain."[36]

"The CPUD utilizes one elevated water storage tank for water system storage and pressure. The tank holds 50,000 gallons. The tank is connected to the distribution system by a common fill inlet and outlet configuration."[37]

"The CPUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of 2,930 GPM, or 4.22 MGD."[38]

The CPUD water system **s**upports 1,032 total connections including three industry-packing houses, and one box plant (see Table 23 [of the Community Plan Update]). Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is concluded that the District's water system is currently operating at or near its capacity, and cannot support additional connections at this time.

The amount of developable land available, including the availability of infrastructure, are two factors that have limited community growth from occurring, including affordable housing objectives, and commercial enterprise.

Currently, the District charges a flat rate for water service in the community. The District should consider installing water meters on all connections to their water system.

"Lovell High School, which is operated by the Cutler-Orosi Joint Unified School District, has requested water capacity from the Cutler PUD. The PUD plans to provide the school with water service pending the approval and implementation of the blending tank project. The school is located at the northwest quadrant of Avenue 392 and State Route 63, which is currently outside of the Cutler PUD boundary and sphere of influence (SOI). It is anticipated that the PUD would provide water service to the school on a contractual basis".[39]

[35] Water Supply Study Cutler – Orosi Area, February 2007. Page 2-2. Prepared by Dennis R. Keller/James H. Wegley. Consulting Civil Engineers.
[36] Ibid. 2-2.
[37] Op. Cit.
[38] Tulare County Housing Element – Action Program 9. Existing Infrastructure. April 2014. Page 2-2. Prepared by VRPA Technologies, Inc.
[39] Tulare County LAFCO. Cutler Public Utility District MSR. Final Report Group 2. May 2006. Page 3-2. https://lafco.co.tulare.ca.us/lafco/index.cfm/msr/group-2-msrs/

Orosi Public Utility District (OPUD)

"The PUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of approximately 2,930 GPM, or 4.22 MGD. The District also has a water storage tank with a capacity of approximately 750,000 gallons."[40]

"OPUD has a total of six developed wells."[41] "Four of the wells are active and two of the wells are inactive at this time. Well No. 6 is inactive and was taken out of service because water test results exceeded the MCL limit for nitrates. Well No. 9 is also considered inactive due to high nitrates and is not connected to the system because of a development dispute. Wells Nos. 4, 5A, 7, and 8 are the four active wells that supply water for the community."[42]

"OPUD has one ground level water storage tank and four hydropneumatic tanks that also provide some limited water storage. The ground level tank has a capacity of 750,000 gallons and delivers water to the system through two booster pumps located at the site of Well No. 5A. There is a 10,000 gallon hydropneumatic tank at each of the active wells. OPUD's water supply and distribution system is shown on Figure 2-3 [in the Water Supply Study 2007]"[43]

As noted in the Tulare County LAFCO MSR, "The Orosi PUD water system supports 1,788 total connections to their water system including 1,639 residential connections, 132 commercial connections, 3 agricultural connections, and 14 connections, which are inactive."[44]

Table 3.10-3
Description of Existing Infrastructure

Community	Drinking Water			Waste Water*		
	No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
Cutler	1,032	1,032	0	1,255	1,255	0
Orosi	1,788	3,788	2,000	2,162	2,162	0

*Source: Tulare County Housing Element. Action Program 9. *May 2012.*

As noted in the Tulare County Housing Element – Action Program 9, "Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is estimated that the PUD's water supply sources could support an additional 2,000 equivalent dwelling units. Special circumstances (i.e. distribution system pressure constraints)

[40] Tulare County Housing Element – Action Program 9. Existing Infrastructure. April 2014. Page 2-2. Prepared by VRPA Technologies, Inc.
[41] Water Supply Study Cutler – Orosi Area, February 2007. Page 2-4. Prepared by Dennis R. Keller/James H. Wegley, Consulting Civil Engineers.
[42]. Ibid.
[43] Op. Cit. 2-5.
[44] Tulare County LAFCO. Orosi Public Utility District MSR. Final Report Group 2. May 2006. Page 4-1. https://lafco.co.tulare.ca.us/lafco/index.cfm/msr/group-2-msrs/

could significantly affect the available capacity, and a complete assessment should be completed by the District Engineer prior to the approval of additional connections."[45]

Flooding

"Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released."[46]

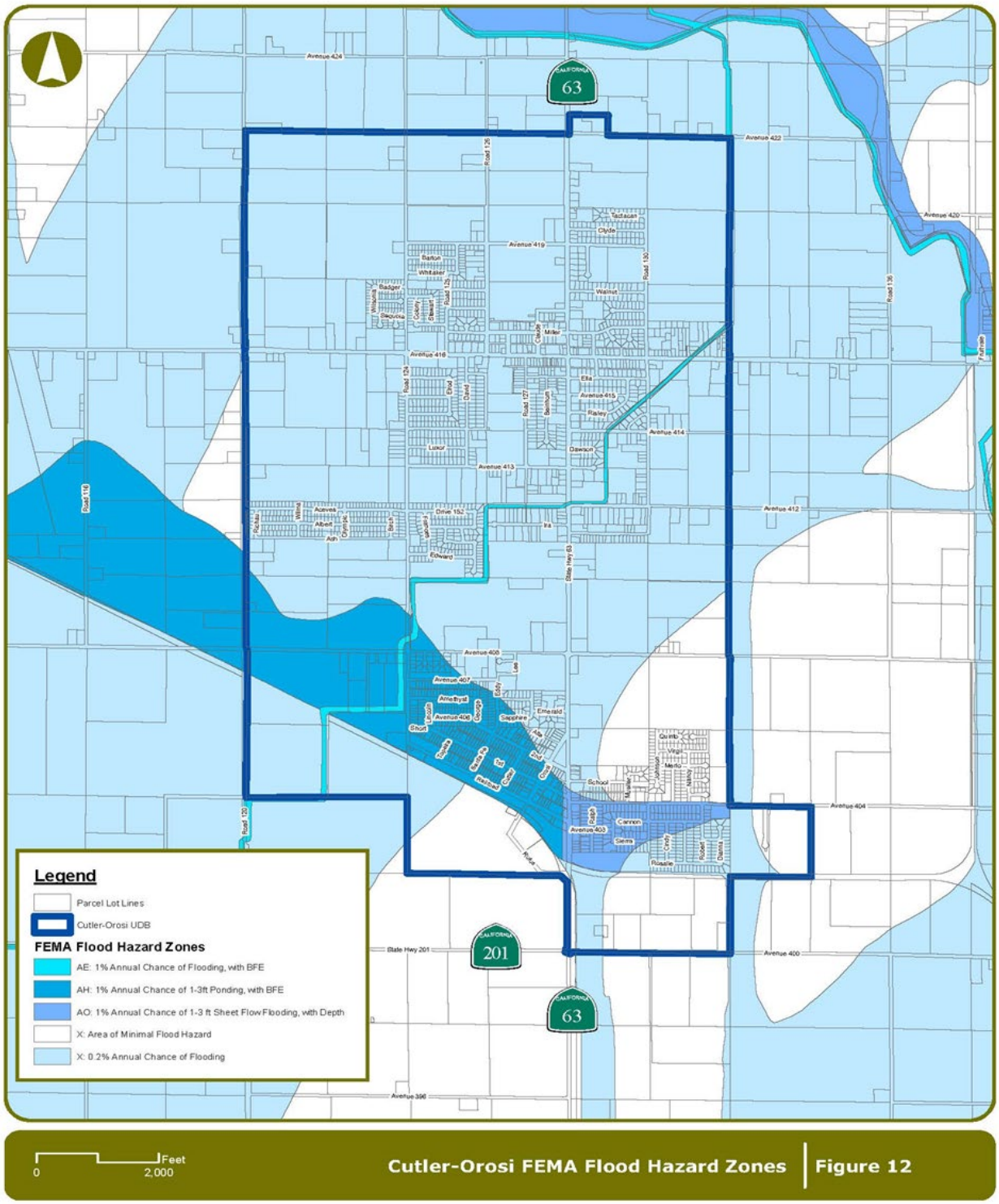
"Floods in the Tulare Lake Hydrologic Region can be caused by heavy rainfall; by dams, levees, or other engineered structures failing; or by extreme wet-weather patterns. Historically, in the Tulare Lake region flooding originates principally from melting of the Sierra snowpack and from rainfall. Flooding from snowmelt typically occurs in the spring and has a lengthy runoff period. Flooding in the region was intermittent, with severe flooding some years and drought in other years. Flash and slow-rise flooding are the most commonly experienced types of flooding in this hydrologic region. Floods that occur in the Tulare Lake region take a variety of forms and can be classified into flash, alluvial fan, debris flow, stormwater, slow-rise, and engineered structure failure flooding. For a complete record of floods, refer California Flood Future Report, Attachment C: Flood history of California technical memorandum (California Department of Water Resources and the U.S. Army Corps of Engineers 2013a)"[47]

"Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms."[48] **Figure 3.10-3** shows the FEMA flood zones in Cutler-Orosi.

"The flood carrying capacity in rivers and streams has decreased as trees, vegetation, and structures (e.g., bridges, trestles, buildings) have increased along the Kaweah, Kings, and Tule Rivers. Unsecured and uprooted material can be carried down a river, clogging channels and piling up against trestles and bridge abutments that can, in turn, give way or collapse, increasing blockage and flooding potential. Flooding can force waters out of the river channel and above its ordinary floodplain. Confined floodplains can result in significantly higher water elevations and higher flow rates during high runoff and flood events."[49]

[45] Tulare County Housing Element – Action Program 9. Existing Infrastructure. April 2014. Page 2-2. Prepared by VRPA Technologies, Inc.
[46] Tulare County General Plan 2030 Update. Background Report. Page 7-33.
[47] California Water Plan Update 2013. Tulare Lake. Pages TL-30.
[48] Tulare County General Plan 2030 Update. Background Report. Page 8-14.
[49] Ibid. 8-14.

Figure 3.10-3
Cutler-Orosi FEMA Flood Hazards Zones Map



"Dam failure can result from numerous natural or human activities, such as earthquakes, erosion, improper siting, rapidly rising flood waters, and structural and design flaws. Flooding due to dam failure can cause loss of life, damage to property, and other ensuing hazards. Damage to electric-generating facilities and transmission lines associated with hydro-electric dams could also affect life support systems in communities outside the immediate hazard area."[50]

Storm Drainage

"A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drainpipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- Water overflowing the curb and entering adjacent property leading to damage
- Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- Over saturation of the roadway structural section due to immersion will lead to pavement deterioration[51]

REGULATORY SETTING

Federal Agencies & Regulations

Clean Water Act/NPDES

"The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972… Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters… The CWA made it unlawful to discharge any

[50] Op. Cit. 8-17.
[51] Draft Cutler-Orosi Community Plan 2021 Update. Page 77.

pollutant from a point source into navigable waters, unless a permit was obtained:

- EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges.
- Point sources are discrete conveyances such as pipes or man-made ditches.
  - Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit;
  - Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters."[52]

Safe Drinking Water Act

"The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards… SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.)"[53]

United States Environmental Protection Agency (U.S. EPA)

The mission of EPA is to protect human health and the environment.
EPA's purpose is to ensure that:

- Americans have clean air, land and water;
- National efforts to reduce environmental risks are based on the best available scientific information;
- Federal laws protecting human health and the environment are administered and enforced fairly, effectively and as Congress intended;
- Environmental stewardship is integral to U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- All parts of society--communities, individuals, businesses, and state, local and tribal governments--have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- Contaminated lands and toxic sites are cleaned up by potentially responsible parties and revitalized; and
- Chemicals in the marketplace are reviewed for safety."[54]

United States Army Corps of Engineers (U.S. ACE)

"The Department of the Army Regulatory Program is one of the oldest in the Federal Government.

[52] United States Environmental Protection Agency (U.S. EPA). Law & Regulations. Summary of the Clean Water Act. Accessed July 2021 at: https://www.epa.gov/laws-regulations/summary-clean-water-act.
[53] EPA summary of the Safe Drinking Water Act Accessed July 2021 at: http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm
[54] EPA Website. Accessed July 2021 at: http://www.epa.gov/aboutepa/whatwedo.html

Initially it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands."[55]

National Flood Insurance Program

"The National Flood Insurance Act of 1968 (Public Law 90-448) created the National Flood Insurance Program, which was to be administered by HUD. Although modified many times, the act remains the legislative foundation of the NFIP. In creating the NFIP, Congress identified two primary objectives: to encourage state and local governments to use land-use adjustments to constrict development of land exposed to flood hazards and guide future development away from such locations, and provide flood insurance through a cooperative public–private program with equitable sharing of costs between the public and private sectors (42 US Code, Section 401 Congressional Findings and Statement of Purpose). With respect to insurance, the law provided that local communities limit new development in some areas of the floodplain, which later were known as Special Flood Hazard Areas (SFHAs; see Appendix E). Once a community agreed to such limits, its citizens would be able to purchase flood insurance policies offered by private insurers in a partnership with the federal government."[56]

State Agencies & Regulations

The Porter-Cologne Water Quality Control Act

"Porter-Cologne, named for the late Los Angeles Assemblyman Carly V. Porter and then-Senator Gordon Cologne, was recognized as one of the nation's strongest pieces of anti-pollution legislation. Through it, the Water Boards have been entrusted with broad duties and powers to preserve and enhance the state's complex waterscape. The new state law was so influential that Congressional authors used sections of Porter-Cologne as the basis of the Federal Water Pollution Control Act Amendments of 1972, known as the Clean Water Act.

The Clean Water Act required the states or the U.S. Environmental Protection Agency (USEPA) to set standards for surface water quality, mandate sewage treatment and regulate wastewater discharges into the nation's surface waters. It established a multi-billion dollar Clean Water Grant Program that, with Clean Water Bond funding, approved by California's voters, assisted communities in building municipal wastewater treatment facilities.

[55] U.S. Army Corps of Engineers. Accessed July 2021 at: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx
[56] National Flood Insurance Program History and Objectives. Accessed July 2021 at: https://www.nap.edu/read/21709/chapter/4#26

The State assumed responsibility for enforcing the Clean Water Act. This involved melding state and federal processes together for activities such as setting water quality standards, issuing discharge permits and operating the grants program."[57]

State Water Quality Control Board

"The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters. The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate. There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality. The task of protecting and enforcing the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment is an ongoing challenge for the State and Regional Water Quality Control Boards."[58]

California Department of Water Resources[59]

This Department's primary mission is to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments. Other goals include:

- Goal 1 - Develop and assess strategies for managing the State's water resources, including development of the California Water Plan Update.
- Goal 2 - Plan, design, construct, operate, and maintain the State Water Project to achieve maximum flexibility, safety, and reliability.
- Goal 3 - Protect and improve the water resources and dependent ecosystems of statewide significance, including the Sacramento-San Joaquin Bay-Delta Estuary.
- Goal 4 - Protect lives and infrastructure as they relate to dams, floods, droughts, watersheds impacted by fire and disasters, and assist in other emergencies.
- Goal 5 - Provide policy direction and legislative guidance on water and energy issues and educate the public on the importance, hazards, and efficient use of water.
- Goal 6 - Support local planning and integrated regional water management through technical and financial assistance.
- Goal 7 - Perform efficiently all statutory, legal, and fiduciary responsibilities regarding management of State long-term power contracts and servicing of power revenue bonds.

[57] California Water Boards. History of the Water Boards. Porter-Cologne: California's Cornerstone of Water Protection Law. https://www.waterboards.ca.gov/about_us/water_boards_structure/history_water_policy.html
[58] State Water Resources Control Board. Accessed July 2021 at: http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml
[59] California Department of Water Resources. Accessed July 2021 at: http://www.water.ca.gov/about/mission.cfm

Goal 8 - Provide professional, cost-effective, and timely services in support of DWR's programs, consistent with governmental regulatory and policy requirements.

Regional Water Quality Control Board

"There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality."[60]

"The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of the Regional Boards and the State Water Resources Control Board are contained in the Porter-Cologne Water Quality Control Act."[61]

Local Policy & Regulations

Tulare County Environmental Health Services

"The Environmental Health Services Division regulates retail food sales and hazardous waste storage and disposal; inspects contaminated sites and monitors public water systems, which protects and reduces the degradation of groundwater. The Division regulates the production and shipping of milk for Tulare and Kings Counties and also serves as staff to the Tulare County Water Commission appointed by the Board of Supervisors. The goal of HHSA's Environmental Health division is to protect Tulare County's residents and visitors by ensuring that our environment is kept clean and healthy."[62] This division requires water quality testing of public water systems.

Any project that involves septic tanks and water wells within Tulare County is subject to approval by this agency. All recommendations provided by this division will be added as mitigation measures to ensure reduction of environmental impacts.

Tulare County General Plan 2030 Update Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

[60] State Water Resources Control Board. Accessed July 2021 at: http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml

[61] California Water Boards. Central Valley Water Quality Control Board. Our Duty. Accessed July 2021 at: http://www.swrcb.ca.gov/centralvalley/about_us/

[62] Tulare County Environmental Health Division. Accessed July 2021 at: http://www.tularehhsa.org/index.cfm/public-health/environmental-health/

PF-4.14 Compatible Project Design - The County may ensure proposed development within CACUABs is compatible with future sewer and water systems, and circulation networks as shown in city plans.

PFS-2.1 Water Supply - The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development.

PFS-2.2 Adequate Systems - The County shall review new development proposals to ensure that the intensity and timing of growth will be consistent with the availability of adequate production and delivery systems. Projects must provide evidence of adequate system capacity prior to approval.

PFS-2.3 Well Testing - The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.4 Water Connections - The County shall require all new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing water district service areas, or zones of benefit, to connect to the community water system, where such system exists. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the water system when service becomes readily available.

PFS-2.5 New Systems or Individual Wells - Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.

PFS-3.1 Private Sewage Disposal Standards - The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.2 Adequate Capacity - The County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity.

PFS-3.3 New Development Requirements - The County shall require all new development, within UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing wastewater district service areas, or zones of benefit, to connect to the wastewater system, where such systems exist. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the wastewater system when service becomes readily available.

PFS-3.7 Financing - The County shall cooperate with special districts when applying for State and federal funding for major wastewater related expansions/upgrades when such plans promote the efficient solution to wastewater treatment needs for the area and County.

PFS-4.1 Stormwater Management Plans - The County shall oversee, as per Community Plan Content Table PF-2.1 and Specific Plan Content, Hamlet Plans Policy PF-3.3, and Table LU-4.3, the preparation and adoption of stormwater management plans for communities and hamlets to reduce flood risk, protect soils from erosion, control stormwater, and minimize impacts on existing drainage facilities, and develop funding mechanisms as a part of the Community Plan and Hamlet Plan process.

PFS-4.2 Site Improvements - The County shall ensure that new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, and Area Plans includes adequate stormwater drainage systems. This includes adequate capture, transport, and detention/retention of stormwater.

PFS-4.3 Development Requirements - The County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance.

PFS-4.4 Stormwater Retention Facilities - The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge.

PFS-4.5 Detention/Retention Basins Design - The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible.

PFS-4.6 Agency Coordination - The County shall work with the Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge.

PFS-4.7 NPDES Enforcement - The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-5.1 Development Compliance with Federal, State, and Local Regulations - The County shall ensure that all development within the designated floodway or floodplain zones conforms to FEMA regulations and the Tulare County Flood Damage Prevention Ordinance. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.2 Development in Floodplain Zones - The County shall regulate development in the 100-year floodplain zones as designated on maps prepared by FEMA in accordance with the following: Critical facilities (those facilities which should be open and accessible during emergencies) shall not be permitted. Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.4 Multi-Purpose Flood Control Measures - The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.

HS-5.6 Impacts to Downstream Properties - The County shall ensure that new County flood control projects will not adversely impact downstream properties or contribute to flooding hazards.

HS-5.9 Floodplain Development Restrictions - The County shall ensure that riparian areas and drainage areas within 100-year floodplains are free from development that may adversely impact floodway capacity or characteristics of natural/riparian areas or natural groundwater recharge areas.

HS-5.10 Flood Control Design - The County shall evaluate flood control project involving further channeling, straightening, or lining of waterways until alternative multipurpose modes of treatment, such as wider berm and landscaped levees, in combination with recreation amenities, are studied.

HS-5.11 Natural Design - The County shall encourage flood control designs that respect natural curves and vegetation of natural waterways while retaining dynamic flow and functional integrity.

WR-1.1 Groundwater Withdrawal - The County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County. These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes.

WR-1.5 Expand Use of Reclaimed Wastewater - To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.

WR-1.6 Expand Use of Reclaimed Water - The County shall encourage the use of tertiary treated wastewater and household gray water for irrigation of agricultural lands, recreation and open space areas, and large landscaped areas as a means of reducing demand for groundwater resources.

WR-2.1 Protect Water Quality - All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - The County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.

WR-2.3 Best Management Practices (BMPs) - The County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.

WR-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

WR-2.5 Major Drainage Management - The County shall continue to promote protection of each individual drainage basin within the County based on the basins unique hydrologic and use characteristics.

WR-2.6 Degraded Water Resources - The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

WR-3.3 Adequate Water Availability - The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

WR-3.5 Use of Native and Drought Tolerant Landscaping - The County shall encourage the use of low water consuming, drought-tolerant and native landscaping and emphasize the

importance of utilizing water conserving techniques, such as night watering, mulching, and drip irrigation.

WR-3.6 Water Use Efficiency - The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

WR-3.10 Diversion of Surface Water - Diversions of surface water or runoff from precipitation should be prevented where such diversions may cause a reduction in water available for groundwater recharge.

Cutler-Orosi Community Plan 2021 Update

The draft Cutler-Orosi Community Plan 2021 Update also has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project in regard to this resource are listed as follows.

GOAL III - Achieve development densities consistent with levels of available service.

Objective I - Urbanization in the planning areas should be contiguous and compact.

Policy 2. The County shall review development proposals for their impacts on infrastructure (for example, sewer, water, fire stations, libraries, streets, etc.). New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. The lack of available public or private services or adequate infrastructure to serve a project, which cannot be satisfactorily mitigated by the project, may be grounds for denial of a project or cause for the modification of size, density, and/or intensity of the project.

Policy 3. The extension of water and sewer facilities into the planning area shall be coordinated with the policies of this Plan and the goals and policies of the Tulare County General Plan. Development in the planning area shall pay their fair share for services

GOAL IV - Coordinate Community Development Decisions with the Cutler PUD and Orosi PUD.

Objective 1 - Ensure that all development can be served by the Cutler Public Utility District (PUD) and Orosi PUD during the planning period**.**

Policy 1. Coordinate zoning with availability of utilities and community services.

Policy 2. Promote commercial and industrial development with wastewater discharge characteristics, which can be accommodated by the Cutler PUD and Orosi PUD.

Policy 3. Encourage industries with excessive effluent to pre-treat Cutler-Orosi wastewater system.

Policy 4. Encourage coordination between developers and the Cutler-Orosi throughout the application and development process to prevent time delays and to assure that the Cutler-Orosi can accommodate the needs of any proposed development.

Policy 5. Before the issuance of any land use permit, the Tulare County Resource Management Agency must receive confirmation from the Cutler-Orosi Wastewater Treatment Plant that water and sewer service requirements can be accommodated.

Policy 6. Assist the Cutler-Orosi Wastewater Treatment Plant in applications for grant funds to carry out their capital improvement program for providing, maintaining and improving their sewer and water systems to serve new and existing developments, which implement the goals and objectives of this Plan and of the Tulare County General Plan.

Policy 7. Prohibit to the extent allowed by law all development from holding, diverting and/or disposing of storm water run-off at locations, or in such a manner, as to cause groundwater recharge contributable to raising the groundwater to an unsafe level in the vicinity of the Cutler/ Orosi wastewater treatment facilities.

Policy 8. Investigate the necessity of preparing a drainage plan, within five years of adoption of the Community Plan, for diverting and disposing of storm water runoff and excess irrigation water at a location, or locations, where the retention or disposition of such water will not contribute to raising the groundwater level in the vicinity of the Cutler-Orosi wastewater treatment facilities.

Policy 9. Before the issuance of any land use permit, the Tulare County Economic and Planning Department will require all project applications for new development or redevelopment to include storm water disposal plans in accordance with the recommendations of the Tulare County Public Works Department and Caltrans to prevent runoff flows into the State highway rights-of-way.

GOAL V - Provide safer and adequate housing for all citizens within the community.

Objective I - Reduce deficiencies in existing housing stock.

Policy 6. The County will ensure that there are adequate sites and will work with the Cutler PUD and Orosi PUD and other agencies to ensure that there are adequate public facilities to support future housing needs in Cutler-Orosi.

GOAL VI – Develop a strong and diversified economy.

Objective I - Provide the services necessary to support new industrial and commercial development.

Policy 1. Encourage the Cutler PUD and Orosi PUD to give priority to community service development in the areas reserved for commercial and industrial growth on the plan.

Policy 2. Place emphasis on development and upgrading of water supply facilities to meet fire protection standards in planned commercial and industrial areas

GOAL VII – Preserve and enhance the quality of life for present and future generation of Cutler-Orosi citizens.

Object III - Protect Agricultural Lands

Policy 5. The County (and developers) shall carefully coordinate the extension of public water and sewer services in the planning area with Cutler Public Utility District (PUD) and Orosi PUD, to promote logical and orderly development patterns

Policy 6. New agricultural preserves and contracts shall not be approved for properties within Cutler PUD and Orosi PUD.

IMPACT EVALUATION

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Project Impact Analysis: ***Less Than Significant Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. Development proposals will be required to comply with applicable local and state (e.g., Tulare County Environmental Health and Regional Water Quality Control Board) water quality standards or waste discharge requirements. Ultimately, through the Year 2030 Planning horizon of the Project, Project-specific impacts related this Checklist item will result in a ***Less Than Significant Impact*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided by the Water Quality Control Plan for the Tulare Lake Basin, Tulare County Department of health and Human Services (Environmental Health Division), Tulare County 2030 General Plan, General Plan Background Report, Tulare County 2030 General Plan EIR, Cutler-Orosi Community Plan 2021 Update, and/or the Cutler and Orosi Public Utility Districts.

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. As future development is proposed, it will be required to comply with applicable requirements, standards, permits, etc., of the California Regional Water Quality Control Board and the Tulare County Environmental Health Division. In addition, Project-specific and cumulative impacts through the Year 2030 Planning horizon will be reduced, minimized, or avoided to a less than significant level. Therefore, the proposed Project will result in a ***Less Than Significant Cumulative Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

With implementation of applicable requirements of the California Regional Water Quality Control Board, Central Valley, Tulare County Environmental Health Division, Cutler PUD, and/or Orosi PUD, potential Project-specific related to this Checklist item will be reduced ***Less Than Significant*** through the Year 2030 Planning horizon. Cumulative impacts related to this Checklist item will also be ***Less Than Significant*** through the Year 2030 Planning horizon.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Project Impact Analysis: ***Less Than Significant Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts.

The draft Cutler-Orosi Community Plan includes population projections for both Cutler and Orosi based on the Tulare County General Plan's projected 1.3% annual increase. This differs from population projections estimated by LAFCO MSR and in the *"Water Supply Study Cutler – Orosi Area"*. The MSR projected a population of approximately 7,400-9,400 persons in Cutler[63] and 12,000-15,300 persons in Orosi,[64] or a combined population of 19,400-24,700

[63] Tulare County LAFCO. Cutler Public Utility District MSR. Final Report Group 2. May 2006. Page 3-1.
[64] Ibid. Orosi Public Utility District MSR. Final Report Group 2. May 2006. Page 4-1.

persons in 2025. The *Water Supply Study Cutler – Orosi Area* projected a population of approximately 5,875 in Cutler and 16,255 in Orosi, or a combined population of 22,130. However, the draft Community Plan contains a projection of 6,657 in Cutler and 8,830 in Orosi for a combined population of 15,480.[65] **Table 3.10-4** shows contrasting population estimates from the *Water Supply Study Cutler – Orosi Area* and draft Community Plan. Subsequently, **Table 3.10-5** and **Table 3.10-6** show projected water needs and projected water use; respectively.

Table 3.10-4
Projected Populations
Water Supply Study
Cutler-Orosi Area

Year Growth Rate	Orosi 3% Annual Growth Rate	Cutler 1% Annual Growth Rate	Combined Population	Community Plan		
				Orosi	Cutler	Combined
2000[a]	7,318[a]	4,491[a]	11,809[a]	7,318[c]	4,491[c]	11,809[c]
2007	9,000[b]	4,815b	13,815			
2010[c]	8,770[c]	5,000[c]	13,770[c]			
2012	10,434[b]	5,061[b]	15,495			
2017	12,096[b]	5,319[b]	17,415	7,760[d]	5,850[d]	13,610[d]
2020				8,067[e]	6,081[e]	14,148[e]
2022	14,022[b]	5,590[b]	19,612	8,278[e]	6,240[e]	14,518[e]
2027	16,255[b]	5,875[b]	22,130	8,830[e]	6,657[e]	15,480[e]
2030	16,897[f]	6,107[f]	23,004	9,179[e]	6,920[e]	16,099[e]

Notes:
a 2000 U.S. Census
b Water Supply Study Cutler – Orosi Area. Table 3-2. Page 3-2.
c 2010 U.S. Census
d 2017 American Community Survey (ACS)
e Projected 1.3% annual growth rate from 2017 ACS. Draft 2021 Cutler-Orosi Community Plan. Tables 39 and 40. Page 177.
f Projected by RMA staff at 3% for Orosi and 1% Cutler.

[65] Draft 2021 Cutler-Orosi Community Plan Update. Page 77. Tables 39 and 40. Page 177.

Table 3.10-5
Projected Water Needs
Water Supply Study - Cutler-Orosi Area[a]

	CPUD[a]	OPUD[a]	Combined[b]
Total Active Water Supply Capacity	1,497 gpm	2,950 gpm	4,447
Firm Water Supply Capacity	497 gpm 0.7 MGD	2,100 gpm 3.0 MGD	2,597 3.7 MGD
Projected Avg. Water Demand (2027)	1.2 MGD	2.4 MGD	3.6 MGD
Peak Demand Factor	1.7	1.5	1.6 (avg.)
Projected Peak Water Demand (2027)	2.1 MGD	3.6 MGD	5.7 MGD
Projected Water Needs – Avg. Demand (2027)	0.5		
Projected Water Needs – Peak Demand (2027)	1.4 MGD	0.6 MGD	2.0 MGD

Notes:
a "Water Supply Study Cutler – Orosi Area." Page 3-6.
b RMA staff.
MGD = million gallons per day
gpm = gallons per minute

Table 3.10-6
Projected Water Use
Water Supply Study - Cutler-Orosi Area[a]

	Population Estimate	Total Average Water Production (MG)	Average Use (MGD)	Water Use/Person (gpcd)
Cutler[b]				
Average 1996-2005		343.33	0.940	208
Year 2027	5,875	439.60	1.204	205
Orosi[c]				
Average 1996-2005		455.23	1.250	169
Year 2027	16,255	889.96	2.438	150
Total Year 2027	22,130	1,329.56	3.642	355

Notes:
a Water Supply Study Cutler – Orosi Area Tables 3-3 and 3-4. Pages 3-4 and 3-5
b Cutler Public Utility District Historic and Projected Water Use Water Supply Study Cutler – Orosi Area Table 3-4. Page 3-5.
c Cutler Public Utility District Historic and Projected Water Use Water Supply Study Cutler – Orosi Area." Table 3-3. Page 3-4.
MGD = million gallons per day
gpcd = gallons per capita per day

The significance of the information contained in **Tables 3.10-4, 3.10-5,** and **3.10-6** is that population, and its associated growth, will impact water usage (i.e., consumption) and water needs/supply. The difference in population projections of +7,425 in Orosi, -782 in Cutler, resulting in a combined +6,905 in population contained in the *Water Supply Study Cutler – Orosi Area* compared to the draft Community Plan implies that water usage and water needs/supply should be re-evaluated to reflect historic, current, and future population trends. As 2020 U.S. Census data is not yet available, the most current year population projections/data (Year 2017) indicate +4,336 in Orosi, -531 in Cutler, and +3,805 combined persons would

result in a per capita change in consumption/need. As shown in **Table 3.10-6**, the 205 gpcd for Cutler and 150 gpcd for Orosi result in 439.60 MG for Cutler and 889.89 MG for Orosi (or a combined total of 1,329.49 MG). Using the same per capita figures, it is estimated that the draft Community Plan's population projections would result in 498.22 MG for Cutler and 483.62 MG for Orosi resulting in a combined 981.18 MG. As such, MG would increase by 58.62 MG for Cutler and decrease by 406.27 in Orosi resulting in an overall decrease of 347.65 MG (or an approximately 26.2% decrease of MG) compared to the combined 1,329.49 MG noted earlier. Although Orosi has a larger population, it consumes less water as it "…completed a water meter installation program in 2004, which resulted in a significant reduction in per capita water use..."[66] Conversely, as noted in the *Water Supply Study Cutler – Orosi Area*, "CPUD does not utilize individual water meters on each service."[67]

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. Therefore, the Project will result in ***No Impact*** to this resource through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided by the Water Quality Control Plan for the Tulare Lake Basin, Tulare County Department of health and Human Services (Environmental Health Division), Tulare County 2030 General Plan, General Plan Background Report, Tulare County 2030 General Plan EIR, Cutler-Orosi Community Plan 2030 Update and/or the Cutler and Orosi Public Utility Districts.. As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. It is possible that additional water use will occur and there will be a need to provide additional supply through the Year 2030 Planning horizon.

As such, ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***See Mitigation Measures 10-1 through 10-6***

[66] Water Supply Study Cutler – Orosi Area, February 2007. Page 3-3. Prepared by Dennis R. Keller/James H. Wegley. Consulting Civil Engineers.
[67] Ibid.

The following mitigation measures are recommendations that are seen as feasible in the Cutler-Orosi planning area and could allow the impact to be reduced to less than significance. Each of these is currently in use in one or more California communities. The first five of these measures could reduce per-unit water consumption by 25-30 percent. The sixth measure would have to be designed to offset the balance of the increased use. Implementation of recommended **Mitigation Measures 3.10-1** through **3.10-6** to Cutler and/or Orosi PUDs, as applicable, would reduce groundwater impacts to less than significance.

3.10-1 Install water meters and adopt a use-weighted rate schedule to encourage reduced usage by the rate-payers.

3.10-2 Retrofit homes with water-efficient faucets, showers, and toilets.

3.10-3 Limit permissible landscape area for each residence to 2,500 square feet or less.

3.10-4 Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources).

3.10-5 Mandate use of native and drought-tolerant species for all landscaping.

3.10-6 Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth.

Conclusion: ***Less Than Significant Impact With Mitigation***

The proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation Measures*** **3.10-1** through **3.10-6** related to this Checklist Item through the Year 2030 Planning horizon.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site?

The proposed Project does not include any projects which would alter any land. The proposed Project does not include any project that would add a significant amount of impervious areas that would cause significant impacts related to drainage. As development occurs within the proposed Project area each, particularly near Sand Creek, will be evaluated on a case-by-case basis to determine if it is necessary to implement a Stormwater Pollution Prevention Plan (SWPPP) as part of their National Pollutant Discharge Elimination System (NPDES) permit if one acre or more. This SWPPP will ensure that potential construction erosion and siltation will not affect offsite drainages. This will prevent any erosion or siltation from occurring onsite or offsite. As such, Project-specific impacts related to this Checklist item will be ***Less Than***

Significant through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. Alteration of a stream or river will be subject to the regulations of the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife.

As the drainage plan will adequately address potential stormwater impacts, a ***Less Than Significant Cumulative Impact*** related to this Checklist item through the Year 2030 Planning horizon will occur.

Mitigation Measure(s): ***None required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, a ***Less Than Significant Project-specific and Cumulative Impact*** related to this Checklist Item will occur.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

"According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community-Panel Number 06107C0345E, Panel No. 345 dated June 16, 2009, (see Figure 12 in the Community Plan update) shows the majority of the Cutler-Orosi footprint is within Flood Zone AO, AE, AH, X (shaded), and X (unshaded). A substantial portion of Cuter/Orosi are subject to 100 and 500 year flood hazard. FEMA requires development in Flood Zones AE to be constructed so that a building's ground floor elevation is above the flood contour line existing in the flood area."[68]

Through the Year 2030 Planning horizon of the Community Plan planning area, it is possible that drainage patterns and rate or amount of surface runoff could result in flooding. However, project design features, conditions of approval, compliance with Building Department requirements/standards, etc., will likely effectively minimize, reduce, or avoid impacts to or by this resource. As such, there will be a ***Less Than Significant Impact*** through the Year 2030 Planning horizon.

Therefore, Project-specific impacts related to this Checklist Item through the Year 2030 Planning horizon will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. Alteration of a stream or river will be subject to the regulations of the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife. As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. Development proposals will be evaluated on a case-by-case basis to determine impacts to this resource.

The proposed Project will not affect any streams or rivers as none exist on the Project site. As noted earlier, through the Planning horizon of the Community Plan planning area, it is possible that drainage patterns and rate or amount of surface runoff could result in flooding. However, project design features, conditions of approval, compliance with Building Department requirements/standards, etc., will likely effectively minimize, reduce, or avoid impacts to or by this resource. A ***Less Than Significant Cumulative Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur. ***No Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. Development proposals will be evaluated on a case-by-case basis to determine impacts to this resource. Through the Planning horizon of the Community Plan planning area, it is possible that stormwater drainage patterns and rate or amount of surface runoff could result in flooding. However, project design features, conditions of approval, compliance with Building Department requirements/standards, etc., will likely effectively minimize, reduce, or avoid impacts to or by this resource. Individual projects will retain stormwater runoff in a retention basin subject to review by the County; therefore, Project-specific impacts related to this Checklist item through the Year 2030 Planning horizon will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements and/or information by the Central Valley Regional Water Quality

Control Board, Tulare County 2030 General Plan, General Plan Background Report, Tulare County 2030 General Plan EIR, Cutler-Orosi Community Plan 2030 Update, and/or the Cutler and Orosi Public Utility Districts.

As such, ***No Cumulative Impacts*** related to this Checklist item through the Year 2030 Planning horizon will occur.

Mitigation Measure(s) ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific Impacts*** related to this Checklist item through the Year 2030 Planning horizon will occur. A ***Less Than Significant Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

iv) impede or redirect flood flows?

"According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community-Panel Number 06107C0345E, Panel No. 345 dated June 16, 2009, [see Figure 12 in the Community Plan update; **Figure 3.10-3** in this Draft EIR] shows the majority of the Cutler-Orosi footprint is within Flood Zone AO, AE, AH, X (shaded), and X (unshaded). A substantial portion of Cuter/Orosi are subject to 100 and 500 year flood hazard. FEMA requires development in Flood Zones AE to be constructed so that a building's ground floor elevation is above the flood contour line existing in the flood area."[69]

Through the Year 2030 Planning horizon of the Community Plan, it is possible that drainage patterns and rate or amount of surface runoff could result in flooding. However, project design features, conditions of approval, compliance with Building Department requirements/standards, etc., will likely effectively minimize, reduce, or avoid impacts to or by this resource. An elevation certificate and associated flood hazard mitigation measures will be required on all proposed buildings within Flood Zone AE. As such, there will be a ***Less Than Significant Impact*** through the Year 2030 Planning horizon.

Therefore, Project-specific impacts related to this Checklist Item will be ***Less Than Significant*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan 2030 Update EIR.

[69] Draft 2021 Cutler-Orosi Community Plan Update. Page 65. Included as Appendix "F" of this Draft EIR.

The Project does not contain any development proposals at this time; future development will be evaluated on a case-by-case basis as development occurs and project design and standards will be implemented to ensure future housing or structures will be significant impacted by flooding. Therefore, a ***Less Than Significant Impact With Mitigation*** related to this Checklist Item through the Year 2030 Planning horizon would occur.

Mitigation Measure(s): ***See Mitigation Measures 3.10-7 through 3.10-9***

3.10-7 An elevation certificate and associated flood hazard mitigation measures is required on all proposed buildings with the FEMA Zone AE.

3.10-8 All new construction of buildings with a shaded Zone AE shall have finished floor levels elevated one (1) foot above the adjacent natural ground.

3.10-9 An elevation certificate and associated flood hazard mitigation measures will be required on all proposed buildings within the special flood hazard area. The finished floor elevations of all structures shall be elevated to at least the established base flood elevation resulting from the flood hazard study.

Conclusion: ***Less Than Significant Impact With Mitigation***

Through the Year 2030 Planning horizon, the Project will result in a ***Less Than Significant Impact With Mitigation***.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Project Impact Analysis: ***No Impact***

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts to this resource. The Project area is relatively flat and is not located near a large body of water, the Pacific coast (the likely place of origin of a tsunami), or hillsides. As such, the proposed Project is not subject to inundation by seiche, tsunami, or mudflow. Also see Item c) iv) regarding flood.

Therefore, ***No Project-specific Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update,

Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update DEIR.

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts to this resource. The proposed Project is not located near a large body of water, the coast or hillsides. The proposed Project will not have any impacts related to this Checklist item on other off-site parcels. ***No Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Project Impact Analysis: ***No Impact***

As indicated earlier in Item b), the proposed Project would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan. As summarized from Item b), earlier, information contained in **Tables 3.10-4, 3.10-5,** and **3.10-6** is that population, and its associated growth, will impact water usage (i.e., consumption) and water needs/supply. The difference in population projections of +7,425 in Orosi, -782 in Cutler, and a combined +6,905 contained in the Water Supply Study Cutler – Orosi Area compared to the draft Community Plan suggests that water usage and water needs/supply should be re-evaluated to reflect historic, current, and future population trends. As shown in **Table 3.10-6**, the 205 gpcd for Cutler and 150 gpcd for Orosi result in 439.60 MG for Cutler and 889.89 MG for Orosi (or a combined total of 1,329.49 MG). Using the same per capita figures, it is estimated that the draft Community Plan's population projections would result in 498.22 MG for Cutler and 483.62 MG for Orosi resulting in a combined 981.18 MG. As such, MG would increase by 58.62 MG for Cutler and decrease by 406.27 in Orosi resulting in an overall decrease of 347.65 MG (or an approximately 26.2% decrease of MG) compared to the combined 1,329.49 MG noted earlier.

Also as noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning

classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. Therefore, the Project will result in ***No Impact*** to this resource through the Year 2030 Planning horizon.

Therefore, the proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. As such, ***No Cumulative Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur. ***No Cumulative Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

DEFINITIONS/ACRONYMS

Abbreviations

AF	Acre-feet
AMP	Agricultural Management Plan
CEQA	California Environmental Quality Act
CIMIS	California Irrigation Management Information System
CPUD	Cutler Public Utility District
CWA	Clean Water Act
DBCP	1,2-Dibromo-3-chloropropane
DEIR	Draft Environmental Impact Report
DWR	State of California Department of Water Resources
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency

gpcd	gallons per capita per day
HUD	U.S. Department of Housing and Urban Development
MCL	Maximum Contaminant Level
M&I	Municipal and Industrial
mg	million gallons
MGD	million gallons per day
MSR	Municipal Services Review
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
OPUD	Orosi Public Utility District
RMA	Tulare County Resource Management Agency
SDWA	Safe Drinking Water Act
SOI	Sphere of Influence
U.S. ACE	United States Army Corps of Engineers
UWMP	Urban Water Management Plan
VRPA	Valley Research and Planning Associates Technologies, Inc. (consultant)
WSA	Water Supply Assessment

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Land Use and Planning
Chapter 3.11

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project, Community Plan Update, Plan Update, or Update)) will result in a ***Less Than Significant Impact*** to Land Use and Planning through the Year 2030 Planning horizon. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. No mitigation measures will be required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis as follows.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Land Use and Planning. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous

conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the County's Land Use and Planning setting. The regulatory setting provides a description of the applicable Federal, State and Local regulatory policies that were developed from the Tulare County 2030 General Plan, Background Report, and the Tulare County General Plan DEIR incorporated by reference and summarized below. A description of the potential impacts from the proposed Project, and the identification of feasible mitigation measures to avoid or lessen the impacts, are provided.

Thresholds of Significance:

- Divide Community
- Conflict with Applicable land use pan policy, or regulation of an agency with jurisdiction over the Project
- Conflict with applicable habitat conservation plan

ENVIRONMENTAL SETTING

"Tulare County is located in a geographically diverse region. The majestic peaks of the Sierra Nevada frame its eastern region, and its western region includes the San Joaquin Valley floor, which is very fertile and extensively cultivated. In addition to its agricultural production, the County's economic base also includes agricultural packing and shipping operations. Small and medium sized manufacturing plants are located in the western part of the county and are increasing in number. Tulare County contains portions of Sequoia National Forest, Sequoia National Monument, Inyo National Forest, and Kings Canyon National Park. Sequoia National Park is entirely located within the county.

The County encompasses approximately 4,840 square miles of classified lands (lands with identified uses) and can be divided into three general topographical zones: valley region; foothill region east of the valley area; and mountain region just east of the foothills. The eastern half of the county is generally comprised of public lands, including the Mountain Home State Forest, Golden Trout Wilderness area, and portions of the Dome Land and south Sierra Wilderness areas. Federal lands, which include wilderness, national forests, monuments and parks, and County parks, account for 52 percent of the County land. Agricultural uses, which include row crops, orchards, dairies, and grazing lands on the Valley floor and foothills account for 43 percent of the County land. Urban uses including incorporated cities, communities, hamlets, unincorporated urban uses, and infrastructure rights-of-way account for the remaining land in the County."[2]

"Cutler-Orosi are located in California's central San Joaquin Valley, in the easterly Valley floor portion of Tulare County (see Figure 1). The two adjacent communities lie in the midst of one of

[1] California Environmental Quality Act (CEQA) Guidelines, Section 15126.2 (a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

[2] Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report. Page 3.1-5.

the most productive agricultural regions in the world, and are virtually surrounded by field crops, orchards, and vineyards.

Cutler-Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the county seat. Both communities are located along State Route (SR) 63 about one half mile apart. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler. The communities are situated at the base of the Sierra Nevada Mountain foothills.

Cutler is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses 0.8 square miles of land (see Figure 2). Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bounded by Avenue 408 in the south, Avenue 424 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses 2.4 square miles of land. State Route (SR) 63 directly serves Orosi. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast.

Cutler-Orosi are located in Sections 07, 08, 17, 18, 19, & 20, Township 16 South, Range 25 East; MDB&M, and can be found within the Orange Cove South Quadrant, United States Geological Survey 7.5 minute topographic quadrangle. Comparatively flat and topographically almost featureless, Cutler-Orosi lies at an elevation ranging from 375 feet above mean sea level (msl), near the northeasterly end of Orosi, to 355 feet msl at the west end of Cutler. The community is situated on a very gentle gradient to the southwest. The coordinates of Cutler-Orosi are Latitude: 36o 31’ 29N” and Longitude: 119o 17’ 20””[3]

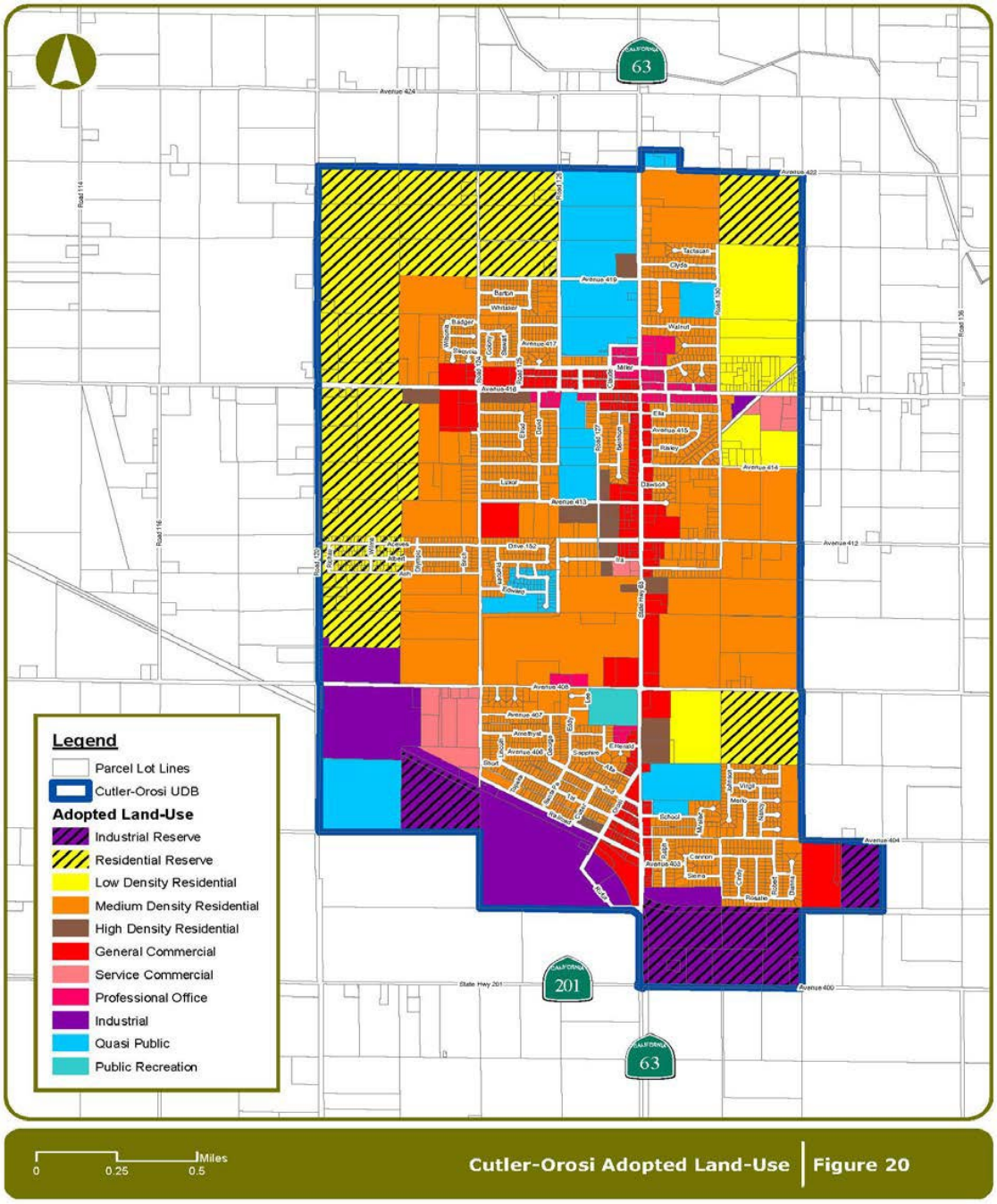
Existing Land Use

“Land use patterns in Cutler and Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

The purpose of the Cutler-Orosi Community Plan is to establish land use policies to guide existing and future development to the year 2030. The general intent of these policies is to protect the health, safety, and welfare of persons living in Cutler-Orosi. In more specific terms, the policies serve to identify the most appropriate locations and arrangement of different types of land uses based upon environmental, circulation, infrastructure/services, and planning concerns.

[3] Draft Cutler-Orosi Community Plan 2021 Update. Page 22-23.

Figure 3.11-1
Adopted Land Use Plan Map (1988)



The County of Tulare, through existing policies, has encouraged both incorporated and unincorporated communities to establish urban development and land use patterns, which are compact and contiguous. This policy position has reduced so-called "leap frog" development

throughout the County, helping preserve agricultural lands, and minimize land use conflicts between urban and agricultural areas."[4]

Land Uses

Consistent with the land uses contained in the Tulare County General Plan, the Cutler-Orosi Community Plan also contains the following land use designations:

"*Low Density Residential* - The Low Density areas are planned to accommodate single-family homes on individual lots where urban services (i.e. community water and sewer) are provided. Properties designated low density residential generally lack adequate infrastructure to warrant higher densities, or serve as a transitional use between urban and agricultural uses. This residential designation promotes a rural environment where livestock and small farming operations are allowed.

Table 3.11-1
Existing (1988) Adopted Land Use Plan Designations

Designation	Total Acreage	Percentage
(blank)	8.3	0.3
General Commercial	140.4	5.7
High Density Residential	38.7	1.5
Industrial	168.3	6.8
Industrial Reserve	135.0	5.5
Low Density Residential	125.1	5.1
Medium Density Residential	850.2	34.8
Professional Office	28.6	1.17
Public Recreation	11.9	0.4
Quasi-Public	201.9	8.2
Residential Reserve	459.9	18.8
Service Commercial	42.8	1.7
Unclassified (Right-of-Way)	231.3	9.4
Total	**2,441.9**	**100**

Source: Draft Cutler-Orosi 2021 Update Land Use Map (Table 1)

Medium Density Residential - Medium Density Residential areas are planned to accommodate single-family homes on individual lots where urban services (i.e.; community water and sewer) are provided, at higher densities than the area designated for Low Density Residential Development. Medium Density Residential is applied to many areas of the residential land in Cutler-Orosi. Properties with this designation are, or will become, the single-family neighborhoods of each community. This designation is generally applied to properties that are free of excessive noise and through traffic, are in close proximity to parks and schools, are provided with off-site sewer and water, and are within the immediate service area of fire and police services.

[4] Ibid. 32.

High Density Residential - High Density Residential designation provides for residential development with a wide range of densities and housing types. High density residential is the designation reserved for multiple family units or apartments. This Plan has attempted to insure that no one quadrant of either community is overburdened with apartments. In addition, multiple family development presents many more design options that can be used to help mitigate noise situations. Therefore, this Plan recommends that most of the high-density residential development be located along arterial or collector streets, which can handle greater amounts of traffic and where noise levels are usually greater than most single-family subdivisions can tolerate.

In addition, this designation has also been applied to areas of Orosi, which contain irregular parcels in terms of size and shape. It is the strategy of this Plan that a higher level of land use many encourage property owners to privately redevelop their land. This redevelopment could lead to removal of dilapidated residential units, a better utilization of the land for residential development, and reduce the residential demands for outlying agricultural properties, thereby preserving agricultural land.

Residential Reserve - Land designated for future residential use, should remain in accordance with Policy 5.1. It should be noted that a general plan amendment is not agricultural use until it is determined that conditions warrant conversion to residential use, needed to develop land in a reserve classification.

General Commercial - Commercial development first appeared near the intersection of SR 63 and Avenue 416, and have since spread in strip fashion along these routes.

Service Commercial - Orosi contains one-area approximately 12 acres of service commercial, located south of Avenue 416. Cutler contains two areas (approximately 68 acres and approximately 11 acres of Service Commercial) along the railbed footprint.

Professional Office - Professional Office contains approximately 16.6 acres. In Orosi, Land Use Designation Professional Office is located along Avenue 416 and SR 63. Family Healthcare Network is located in Cutler on Avenue 408.

Industrial - Currently, industry in the Cutler-Orosi area is concentrated along the railbed. Included in this area are packing houses, cold storage facilities, a box manufacturing plant, and an agricultural chemical company. Orosi has a five (5) acre parcel south of Avenue 416. Cutler is along the railbed and on east side of SR 63.

Agriculture - Agriculture is the foundation of Tulare County's economy. For this reason, it is important that agricultural lands be preserved and that agricultural operations remain free of adjacent incompatible land uses, which may hamper the operation. The Cutler-Orosi Community Plan takes into consideration surrounding agricultural operations and their needs to be free of intruding urban uses. Where possible, the UDB follows a road, railroad, or creek so that there is some spatial distance between future urban uses and agriculture.

Industrial Reserve - Land within the Plan Area which is recognized as suitable for industrial uses or agriculturally-related industries and is designated for eventual conversion to commercial use, but which is expected to be left in exclusive agricultural zoning until it is determined that conditions warrant conversion to industrial use, in accordance with Policy 5.1.

Park [Public Recreation] - Ledbetter Park is approximately 11 acres in size and is located one mile northwest of Cutler on Road 124/SR 63."[5]

Quasi Public – Land uses such as schools, public utility facilities, churches, etc.

Unclassified (Right-of Way) - Streets and roadways (and easements), sidewalks, railroad, creeks/ditches/canals and their banks.

Agriculture

As noted earlier, the Cutler-Orosi Community Plan takes into consideration surrounding agricultural operations and their needs to be free of intruding urban uses. Where possible, the UDB follows a road, railroad, or creek so that there is some spatial distance between future urban uses and agriculture.

"According to the 2030 Update of the Tulare County General Plan, Tulare County's economy has historically been driven by agriculture and has had one of the largest agricultural outputs of any county in the US. Nearly 20% of the employment in Cutler-Orosi is agriculturally related according to the Tulare County Housing Element."[6]

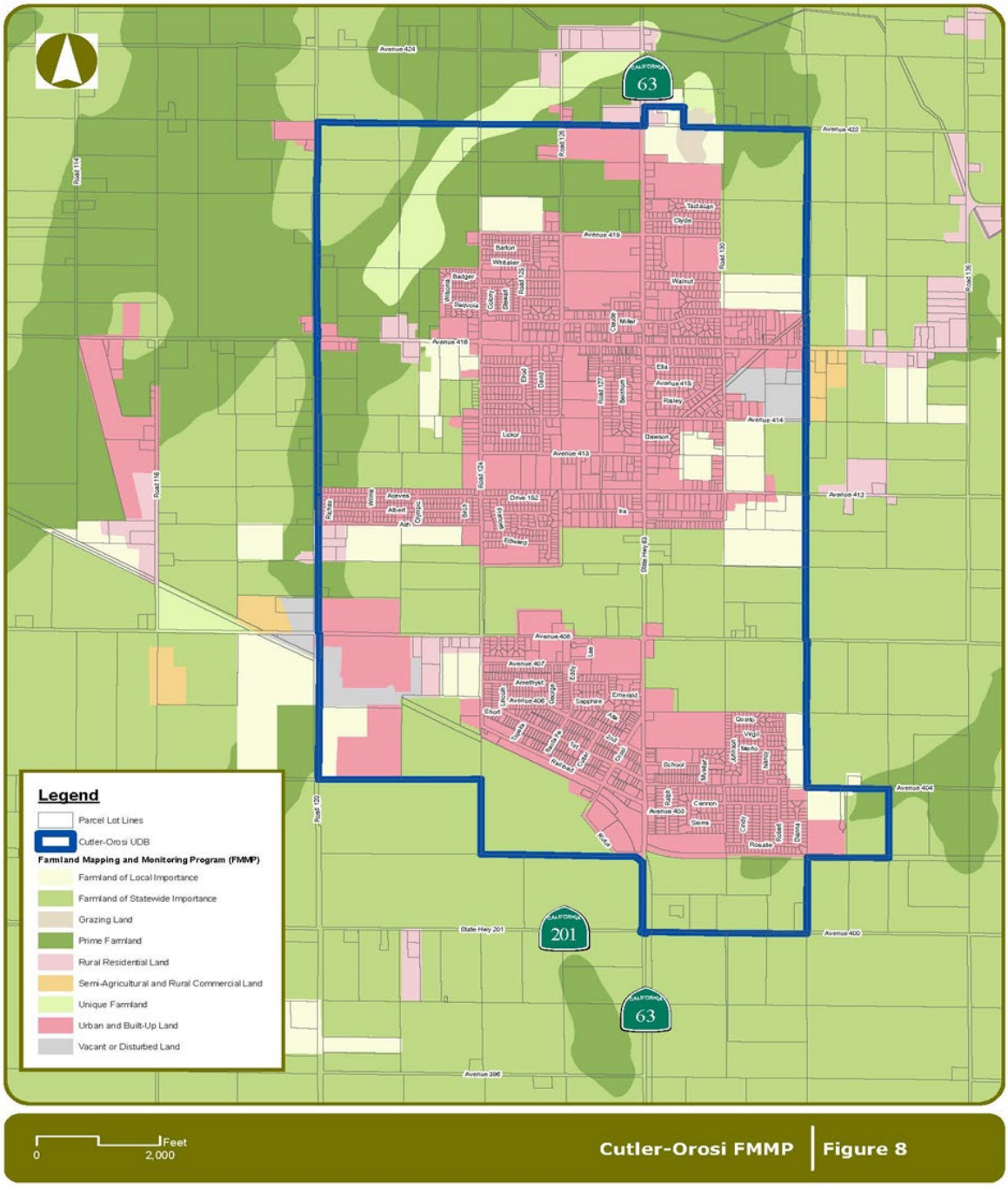
There is Prime Farmland and Farmland of Statewide Importance located within and adjacent to the Cutler-Orosi Plan Area. "Prime Farmland is farmland with the best combination of physical and chemical features to sustain long-term agricultural production. Farmland of Statewide Importance is similar, but with minor shortcomings, including greater slopes and a reduced ability to store soil moisture; and Unique Farmland has lesser quality soils used for the production of the state's leading agricultural crops".[7] "The area within the existing 2,441.9-acre UDB is designated in the 2017 FMMP maps (see Figure 8 [in the Community Plan and **Figure 3.11-2** in this Draft EIR]). Of these, approximately 1,246.9 acres are designated Urban and Built-up Land, approximately 956.9 acres are designated Prime Farmland."[8]

"The circulation system in Tulare County plays a significant role in the economy by moving goods and people. A rural region, Tulare County is dependent on local highways, streets, roads, and railways to meet basic transportation needs. Goods movement is specifically dependent on road conditions and capacity. Tulare County and its cities have implemented programs to reduce congestion and improve the efficiency of our highways, streets, and roads network. Transit and active modes of transportation, such as bicycling and walking are becoming a larger share of the

[5] Op. Cit. 32-34.
[6] Op Cit. 43.
[7] Op. Cit. 51.
[8] Op. Cit. 51

transportation system."[9]

Figure 3.11-2
Farmland Mapping and Monitoring Program (FMMP) Map



[9] Tulare County Association of Governments (TCAG). Regional Transportation Plan 2018. Action Element. Page B-1. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/action-element/

"Recognizing that agriculture is the region's economic base, Tulare County strives to maintain and improve the transportation infrastructure that is essential to this industry."[10] "Agriculture accounts for a large percentage of commodity movement and truck traffic within and through Tulare County. In 2015, Tulare County farms produced over $ 5.6 billion in gross revenue [$ 7.5 billion in 2018[11]] as estimated by the County Agricultural Commissioner's office. Tulare County continues to be the top dairy producing county in the nation. Unlike other forms of agriculture, dairies harvest and transport their product every day of the year."[12] "Other major types of commercial truck travel in the region include: retail distribution, construction, gravel mining, delivery to and from industrial facilities, gasoline and fuel distribution, and household goods movement. Destinations for commodity movement in the region include farms, packing and processing plants, cold storage facilities, grain elevators, manufacturers, and distribution centers. There has also been a trend for warehouses and large distribution centers to locate in this area due to high costs of conducting business in larger metropolitan areas, land availability and reduced cost, and the central location of Tulare County between the Los Angeles and Bay Area metropolitan areas."[13]

"Projections indicate that this region can expect population growth, and therefore travel demand, to continue to increase steadily during the scope of this RTP. Since 1950, Tulare County population has experienced a 1.9% annualized growth rate, as displayed in Table A-2.2 [of the RTP]. As more housing is constructed and employers move into Tulare County to accommodate (and stimulate) population growth, travel demand will continue to increase. Agencies have developed land use plans to accommodate growth within their jurisdictions. The RTP addresses plans to accommodate the short and long term future needs of the transportation system in the region."[14]

Urban Boundaries

"The existing Cutler-Orosi Urban Development Boundary (UDB) area (see Figure 4 [in the Community Plan; **Figure 3.11-3** in this Draft EIR]) consists of approximately 2,441.9-acres (including rights-of-way). Within the existing Cutler-Orosi UDB, approximately 1,245.4-acres are currently zoned for urban uses and approximately 956.9 acres are zoned for agricultural uses. Cutler-Orosi are surrounded by agricultural lands, crops grown on these lands include field crops, deciduous fruit orchards, and vineyards. Unlike many Valley communities, there is little rural residential development (1 to 5 acre homesites) surrounding either community. The UDB includes areas within the Cutler Public Utility District (CPUD) and the Orosi Public Utility District (OPUD) in order to provide service area consistency between these two boundaries."[15]

Former Atchison Topeka Santa Fe Railroad

[10] Ibid.
[11] 2019 Tulare County Annual Crop and Livestock Report. September 2020. Cover letter from Tom Tucker, Agricultural Commissioner. Accessed at: https://agcomm.co.tulare.ca.us/ag/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2019-crop-report/
[12] Tulare County Association of Governments (TCAG). Regional Transportation Plan 2018. Action Element. Page B-1.
[13] Ibid.
[14] Op. Cit. B-12.
[15] Draft 2021 Cutler-Orosi Community Plan Update. Page 30.

"Cutler is bisected north and south by SR 63. It was bounded on the south by the Atchison Topeka Santa Fe Railroad and agricultural land, on the north and east by agricultural land, and on the west by the railroad, the wastewater treatment plant and two major packinghouses. The western half of Cutler is almost fully developed, whereas the eastern half is less than 50 percent urbanized. The Atchison Topeka Santa Fe Railroad tracks that bounded Cutler to the south is now abandoned right-of-way. The railroad tracks and crossties were removed."[16]

REGULATORY SETTING

Federal Agencies & Regulations

Federal Endangered Species Act

"Through federal action and by encouraging the establishment of state programs, the 1973 Endangered Species Act provided for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend. The Act:

- authorizes the determination and listing of species as endangered and threatened;
- prohibits unauthorized taking, possession, sale, and transport of endangered species;
- provides authority to acquire land for the conservation of listed species, using land and water conservation funds;
- authorizes establishment of cooperative agreements and grants-in-aid to States that establish and maintain active and adequate programs for endangered and threatened wildlife and plants;
- authorizes the assessment of civil and criminal penalties for violating the Act or regulations;
- authorizes the payment of rewards to anyone furnishing information leading to arrest and conviction for any violation of the Act or any regulation issued there under."[17]

State Agencies & Regulations

California Department of Fish and Game

"The Mission of the Department of Fish and Wildlife is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public."[18] This includes habitat protection and maintenance in a sufficient amount and quality to ensure the survival of all species and natural communities. The department is also responsible for the diversified use of fish and wildlife including recreational, commercial, scientific and educational uses.

[16] Ibid. 26.

[17] Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service. Federal Endangered Species Act. http://www.fws.gov/laws/lawsdigest/esact.html

[18] California Department of Fish and Game. Accessed July 2021 at: https://wildlife.ca.gov/

California Endangered Species Act

"The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The Department will work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats."[19]

Local Policy & Regulations

San Joaquin Valley Regional Blueprint

"The San Joaquin Valley Regional Blueprint Planning Process, www.valleyblueprint.org, is funded by the Business, Transportation & Housing Agency through the California Department of Transportation, and the San Joaquin Valley Unified Air Pollution District. The Blueprint is an opportunity for Valley residents, businesses, government agencies, and organizations to work together to plan for the future of transportation and land use in the San Joaquin Valley.

By engaging citizens and policymakers at the local and county level, the Valley will be able to create a regional vision to ensure that California's fastest growing region will thrive into the 21st century. The local councils of governments in the eight counties that make up the San Joaquin Valley Air Basin have joined together, with assistance from the Great Valley Center and the San Joaquin Valley Unified Air Pollution Control District, to begin a most ambitious project that will develop a map, a Blueprint, that will create a better future for the residents of the valley.

The process began in early 2006 and will near completion at the end of 2008 with a Blueprint that will be adopted and followed by all the counties in the region. Regional approaches to address regional issues will become even more important as this region faces a projected doubling of the population in the next 40 years. The Valley Blueprint will call upon all residents of the valley from the diverse variety of backgrounds that make this valley their home, to create a plan for the future. Individuals from civic groups, business, industry, agriculture, environmental and government groups as well as individuals from all walks of life are invited to become involved in this Blueprint Planning Process.

Through a series of community meetings held throughout the San Joaquin Valley, residents will be able to provide their vision for the future, identifying the values that are most important to them. The San Joaquin Valley Regional Blueprint Planning Process will coordinate infrastructure plans in the San Joaquin Valley with local community goals. It will provide better decision-making tools to use to solve regional issues. On surveys, air quality is always listed as a high priority for the residents. The Valley Air District welcomes this regional approach and partnership to work toward clean, health air for the residents of our valley.

[19] California Endangered Species Act. Accessed July 2021 at: www.wildlife.ca.gov/Conservation/CESA/

A new approach is essential if we hope to avoid the planning mistakes made by other fast growing regions. The San Joaquin Valley Regional Blueprint Planning Process provides the opportunity for every resident of this valley to become actively involved in creating a future of which we can be proud."[20]

Tulare County Regional Blueprint

"The Tulare County Association of Governments (TCAG) has been an active participant in the development of the San Joaquin Valley Regional Blueprint. The San Joaquin Valley Regional Blueprint Planning Process is a chance to plan for the future of transportation and land use in the San Joaquin Valley to the Year 2050. The San Joaquin Valley Regional Blueprint will provide a proactive plan to help guide us down a cooperative path as a region and addresses regional issues such as land use and transportation that can't be adequately addressed on a county-by-county basis

While the issues addressed in San Joaquin Valley Regional Blueprint are large in scale and very regional, the key to Blueprints are the local jurisdictions who will implement Blueprint Principles. TCAG and its member agencies felt that it was important to prepare a Tulare County Regional Blueprint that clarified Tulare County's role in the Blueprint process. The Tulare County Regional Blueprint is a stand-alone policy document that is consistent with the San Joaquin Valley Regional Blueprint. This document represents Tulare County's local vision and goals as a participant in the San Joaquin Valley Regional Blueprint process."[21]

Tulare County Association of Governments (TCAG)

"Tulare County Association of Governments (TCAG) is a collaboration of regional governments representing one of the largest agricultural centers in the world, and we are committed to improving the quality of life for our communities. We create regional plans for building regional projects, coordinating local transit programs and fostering partnerships to build multi-family housing. We strive to meet national standards as we work to improve air quality and create more equitable accessibility to critical resources for all of our residents, building new means of active transportation and improving existing infrastructure. We rely on science and local data to both respond to current housing and transportation needs and to prepare for forecasted growth. We find modern solutions for the unique challenges presented by our geographically and socioeconomically diverse districts.

TCAG is a cooperative organization formed by a joint powers agreement in 1971, representing the eight incorporated cities of our jurisdiction (Dinuba, Exeter, Farmersville, Lindsay, Porterville, Tulare, Visalia, and Woodlake) as well as the County of Tulare at large. Our purpose is to assist local jurisdictions in obtaining federal assistance by providing advice, counsel, and professional direction; review and coordinate applications for programs utilizing federal funding; and, as a Local Clearinghouse, coordinate state grants by circulating notices, collecting comments, and reporting to the TCAG Board. TCAG also operates as a Regional Data Center (RDC), which is a

[20] San Joaquin Valley Regional Blueprint. Accessed July 2021 at: http://www.valleyair.org/Programs/ValleyBlueprint.htm

[21] Tulare County Association of Governments (TCAG). Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/tulare-county-blue-print/

state-designated center for handling and coordinating census activity. This includes providing data to interested agencies and tracking annual projections."[22]

Existing County Land Uses

The proposed Project site is located in the northwestern portion of Tulare County. Tulare County is 4,863 square miles in area and is located in the San Joaquin Valley portion of California's Great Central Valley. It lies south of the Sacramento-San Joaquin Delta and is bordered by Fresno County to the north, Kings County to the west, Kern County to the south, and Inyo County to the east. The valley land portion is approximately 3,930 square miles or approximately 81 percent of Tulare County. Open space, which includes wilderness, national forests, monuments and parks, and county parks, encompass approximately 1,230 square miles, or approximately 25 percent of the County. Agricultural uses total approximately 2,150 square miles or approximately 44 percent of the entire County. Incorporated cities in the Tulare County account for less than three percent of the entire County area.

The County's primary regulatory tool for implementing the General Plan is the Zoning Ordinance. Tulare County's first zoning ordinance was adopted in 1947 as Ordinance 352. The current Tulare *County Zoning Ordinance and related State and Local Land Use Regulations was revised in September 2005* and covers the entire unincorporated county. The Zoning Ordinance has been amended many times since 2005, but has not undergone a comprehensive update. The zoning regulations regulate the extent and type of development that can occur in the unincorporated areas, therefore the outdated ordinance is limiting the County's holding capacity and build out potential. A major difference between the general plan and zoning is that the General Plan provides guidance on the location, type, density, and timing of new growth and development over the long-term, while zoning determines what development can occur on a site specific basis. The land general plan use designations, and the zoning classifications and development standards of the zoning ordinance, determine the County's holding capacity and buildout potential.

The *Zoning Ordinance* establishes three residential zones, four commercial zones, three industrial zones, and seven other zones related to agriculture, timber, and resource-related uses. The purpose of the zones is to translate the broad land use categories established by the *Tulare County General Plan* into detailed land use classifications that are applied to properties with much greater precision than the General Plan. The zoning classifications follow specific property lines and road alignments and correspond to the applicable General Plan categories. Working with the zoning classifications, the text of the *Zoning Ordinance* provides detailed regulations for the development and use of land.

Tulare County General Plan Policies

The General Plan contains the following policies aimed at reducing potential land use conflicts, promoting an efficient urban form, and ensuring consistency with local land use and environmental plans. General Plan policies that relate to the proposed Project are listed below.

[22] TCAG. About. Accessed July 2021 at: https://tularecog.org/tcag/about-us/

ED-2.2 Land Requirements - The County shall ensure there is capacity for new and expanding businesses by: Reserving sufficient locations for industry, recognizing industry's need for greater land requirements; Recognizing the need for a variety of locations to avoid creation of a monopoly of the industrial land market and to reflect varying requirements for transportation facilities and utility services; and Reserving land for exclusive industrial use to encourage development of like industries that complement each other and to prevent encroachment on industrial areas by incompatible uses.

ED-2.11 Industrial Parks - As part of new or updated community plans, the County shall designate sites for industrial development to meet projected demand.

ED-3.1 Diverse Economic Base - The County shall actively promote the development of a diversified economic base by continuing to promote agriculture, recreation services, and commerce, and by expanding its efforts to encourage industrial development including the development of energy resources.

ERM-2.9 Compatibility - The County will encourage the development of mineral deposits in a manner compatible with surrounding land uses.

PF-1.1 Maintain Urban Edges - The County shall strive to maintain distinct urban edges for all unincorporated communities within the valley region or foothill region, while creating a transition between urban uses and agriculture and open space.

PF-1.2 Location of Urban Development -
The County shall ensure that urban development only takes place in the following areas:

1. Within incorporated cities and CACUDBs;
2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;
3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plan;
4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and
5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the Rural Valley Lands Plan.

PF-1.3 Land Uses in UDBs/HDBs - The County shall encourage those types of urban land uses that benefit from urban services to develop within UDBs and HDBs. Permanent uses which do not benefit from urban services shall be discouraged within these areas. This shall not apply to agricultural or agricultural support uses, including the cultivation of land or other uses accessory to the cultivation of land provided that such accessory uses are time-limited through Special Use Permit procedures.

PF-1.4 Available Infrastructure - The County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction

with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies.

PF-2.1 Urban Development Boundaries – Communities - The County shall limit urban development to the area within the designated UDB for each community. Each community's UDB is defined as shown on Figures 2.2-2 thru 2.2-22 [in the Policy section of the General Plan].

PF-2.4 Community Plans - The County shall ensure that community plans are prepared, updated, and maintained for each of the communities. These plans shall include the entire area within the community's UDB and shall address the community's short and long term ability to provide necessary urban services.

PF-2.7 Improvement Standards in Communities - The County shall require development within the designated UDBs to meet an urban standard for improvements. Typical improvements shall include curbs, gutters, sidewalks, and community sewer and water systems.

PF-2.8 Inappropriate Land Use - Areas within UDBs are hereby set aside for those types of urban land uses which benefit from urban services. Permanent uses which do not benefit from such urban services shall be discouraged within the UDBs. This is not intended to apply to agricultural or agricultural supported uses, including the cultivation of land or other uses accessory to the cultivation of land, provided that such accessory uses are time-limited through special use permit procedures.

LU-1.2 Innovative Development - The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

LU-2.3 Open Space Character - The County shall require that all new development requiring a County discretionary approval, including parcel and subdivision maps, be planned and designed to maintain the scenic open space character of open space resources including, but not limited to, agricultural areas, rangeland, riparian areas, etc., within the view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible and use design, construction and maintenance techniques that minimize the visibility of structures on hilltops, hillsides, ridgelines, steep slopes, and canyons.

LU-3.1 Residential Developments - The County shall encourage new major residential development to locate near existing infrastructure for employment centers, services, and recreation.

LU-3.2 Cluster Development - The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately-maintained road designed to meet County road standards.

LU-3.3 High-Density Residential Locations - The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

LU-5.1 Industrial Developments - The County shall encourage a wide range of industrial development activities in appropriate locations to promote economic development, employment opportunities, and provide a sound tax base.

LU-5.4 Compatibility with Surrounding Land Use - The County shall encourage the infill of existing industrial areas and ensure that proposed industrial uses will not result in significant harmful impacts to adjacent land uses.

LU-5.7 Industrial Uses Allowed on Resource Land - The County shall allow asphalt batch plants and similar processing facilities that are directly associated with the development of a resource to be located at the site of the resource under the following criteria: Any such site shall be developed under the Special Use Permit process, and The Special Use Permit shall not permit any commercial or industrial uses that are not related to the processing of the resource.

LU-6.2 Buffers - The County shall ensure that residential and other non-compatible land uses are separated and buffered from major public facilities such as landfills, airports, and sewage treatment plants.

LU-7.2 Integrate Natural Features - The County shall emphasize each community's natural features as the visual framework for new development and redevelopment.

ED-2.3 New Industries - The County shall encourage new industries to locate within cities, unincorporated communities, hamlets, regional growth corridors, and other unincorporated County areas where appropriately zoned. The County, in cooperation with cities and communities will identify locations for industrial uses in unincorporated areas around cities consistent with the cities' economic development strategies, taking into account opportunities offered by variations in local environmental conditions.

IMPACT EVALUATION

Would the project:

a) Physically divide an established community?

Project Impact Analysis: ***Less Than Significant Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and

Zoning Map for Cutler-Orosi. The Urban Development Boundary will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. The proposed land use plan (including the Urban Development Boundary (UDB)) is shown in **Figure 3.11-3;** while **Figure 3.11-4** shows proposed zoning classifications.

Therefore, the proposed Project will not disrupt or divide an established Community. Expansion of the UDB; however, provides increased opportunities to meet the needs of future growth at full build-out. This will result in a ***Less Than Significant Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary will also be expanded to accommodate projected growth and land use needs. Also, as noted earlier, expansion of the UDB provides increased opportunities to meet the needs of future growth at full build-out. As such, the Project would result in a ***Less than Significant Impact*** related to this Checklist Item through the Year 2030 Planning Horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Project Impact Analysis: ***No Impact***

As a result of the Tulare County 2030 General Plan Update, and changes to land uses and zoning designations throughout the Community over the years, there are several inconsistent and non-compliant land uses within the Community of Cutler-Orosi. As part of the Community

Plan update process, the Community Plan land uses and zoning districts were updated for certain parcels to conform to the Tulare County General Plan.

Figure 3.11-3
Proposed Land Use Plan – Cutler-Orosi

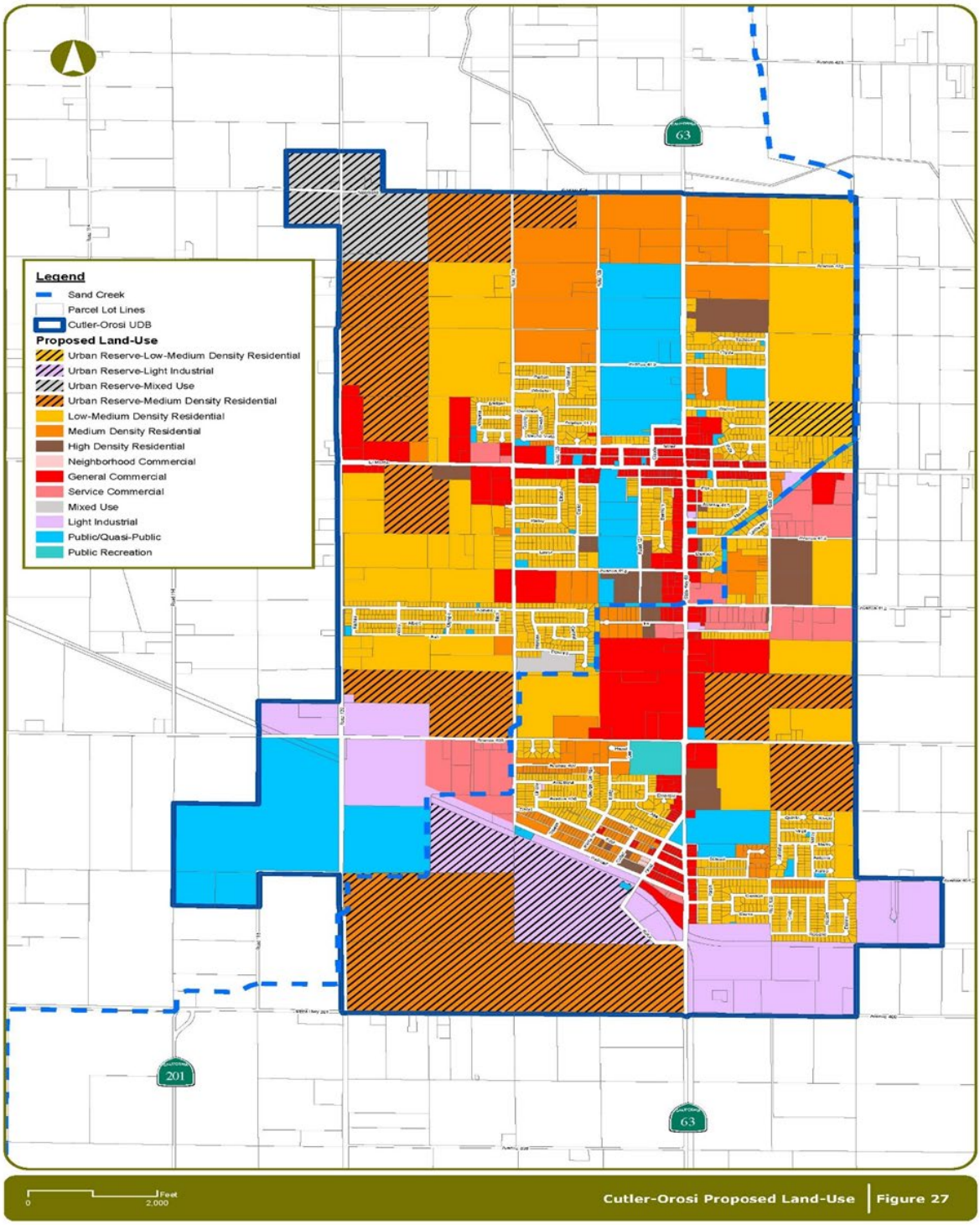
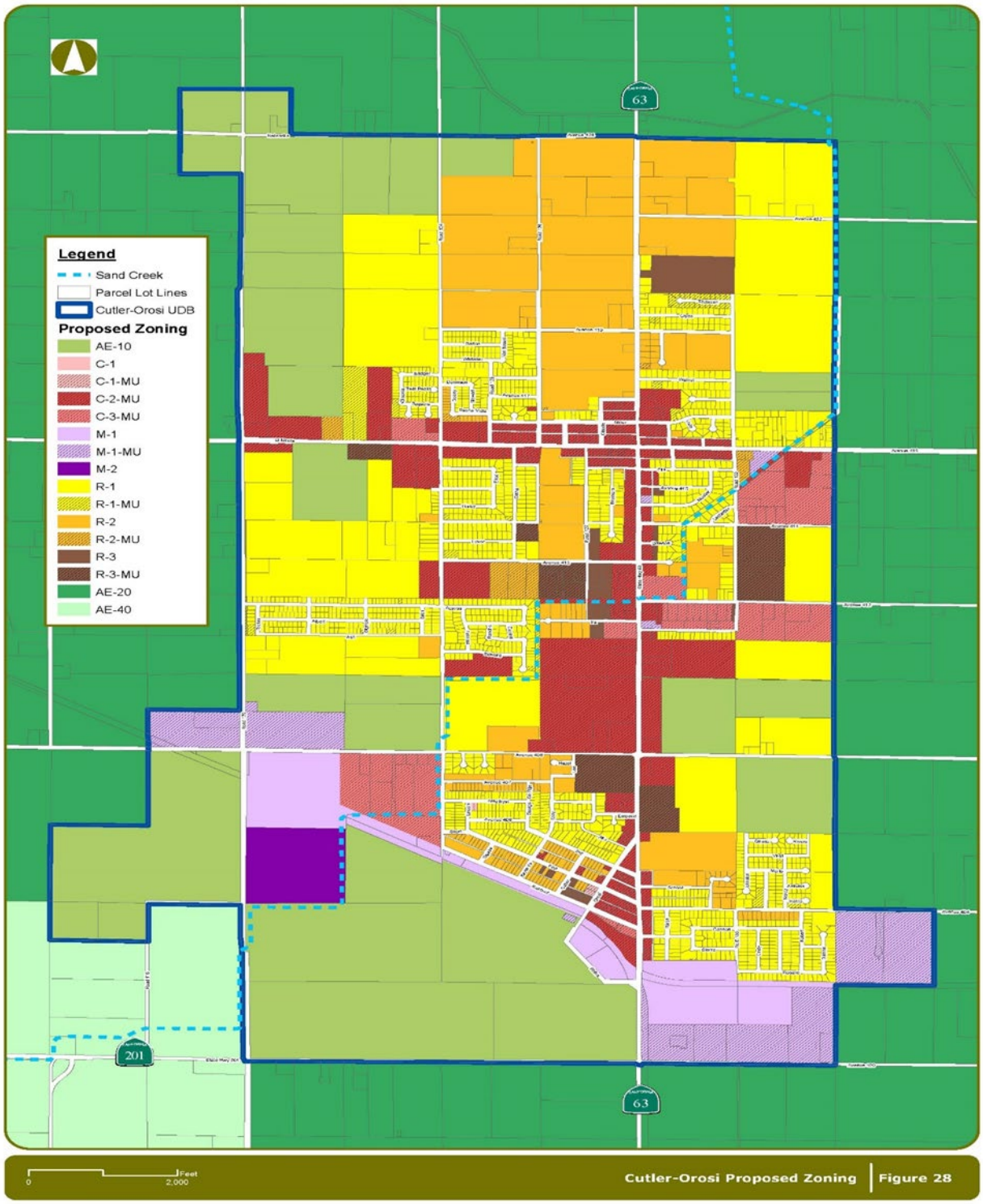


Figure 3.11-4
Proposed Zone – Cutler-Orosi



As part of this Project, the County is adopting a change to the Zoning Code to allow a Mixed Use Zoning District consistent with the General Plan's new Mixed Use land use designation. Also, the Project would result in expansion of the Updated Plan's Urban Development Boundary to accommodate projected growth and land use needs.

The Community Plan also includes a Complete Streets Program, which has been developed concurrently with this process and has been found to be in consistent with the requirements of the Complete Streets Program.

As one of the components of the proposed Project is adjusting its Urban Development Boundary to be consistent with other agencies' jurisdictional boundaries, and to be consistent with the Tulare County General Plan, the Project will not conflict with any of the previously noted land use plans. Therefore, ***No Project-specific Impact*** related to this Checklist Item will occur through the Year 2030 Planning Horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Expanding the UDB would allow consistency with other agencies' jurisdictional boundaries. As such, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning Horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***No Project-specific and Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning Horizon.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Project Impact Analysis: ***No Impact***

There are no designated Wildlife Areas near Cutler-Orosi. The nearest wildlife area (Pixley National Wildlife Refuge) is located approximately 43 miles southwest. As noted in Chapter 3.4 Biological Resources, there are two habitat conservation plans that apply in Tulare County: 1) Recovery Plan for Upland Species of the San Joaquin Valley, and 2) the Kern Water Bank Habitat Conservation Plan (which only applies to an area in Allensworth located in southwestern Tulare County). As such, there are no conservation or natural community

conservation plans applicable to the Cutler-Orosi area. Therefore, ***No Project-specific Impacts*** related to this Checklist Item will occur through the Year 2030 Planning Horizon.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

There are no impacts related to habitat conservation or natural community conservation plans, and therefore ***No Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning Horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning Horizon.

ACRONYMS

CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CPUD	Cutler Public Utility District
DEIR	Draft Environmental Impact Report
FMMP	Farmland Mapping and Monitoring Program
OPUD	Orosi Public Utility District
SR	State Route
RDC	Regional Data Center
RTP	Regional Transportation Plan
TCAG	Tulare County Association of Governments
UDB	Urban Development Boundary

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Section 15126.2 (a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-

Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

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Mineral Resources
Chapter 3.12

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project) will result in ***No Impacts*** related to Mineral Resources as the Project area is not located near a known mineral resource area. No mitigation measures will be required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Mineral Resources. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions

(e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Mineral Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The Tulare County 2030 General Plan identifies known Mineral Resource areas. The threshold of significance for this section will include the following:

- Impact a known Mineral Resource
- Result in the loss of availability of a locally-important mineral resource recovery site.

ENVIRONMENTAL SETTING

"There is estimated to be a total of 932 million tons of aggregate resources in Tulare County. This figure includes 219 million tons of reserves available for mining and 200 million tons that are located in the hard rock quarries southeast of Porterville. Of that total, 19 million tons are located in Northern Tulare County, which is expected to be depleted by the year 2010 unless new resources are permitted for mining. Lemon Cove has been the most highly extracted area for PCC quality aggregate supplies."[2]

"Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur... The majority of these activities appear to occur in the Sierra Foothill Area."[3]

"The following MRZ categories are used by the State Geologist in classifying the State's lands. The geologic and economic data and the arguments upon which each unit MRZ assignment is based are presented in the mineral land classification report transmitted by the State Geologist to

[1] Tulare County General Plan Update 2030. Background Report. February 2010. Pages 10-18.
[2] Ibid.
[3] Op. Cit. 10-17.

the SMGB.

A. MRZ-1—Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone is applied where well developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight.

B. MRZ-2a—Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. As shown on the diagram of the California Mineral Land Classification System, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ□2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.

C. MRZ-2b—Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exists or where there is an exposure of mineralization of economic importance.

D. MRZ-3a—Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. As shown on the diagram of the California Mineral Land Classification System, MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of a MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.

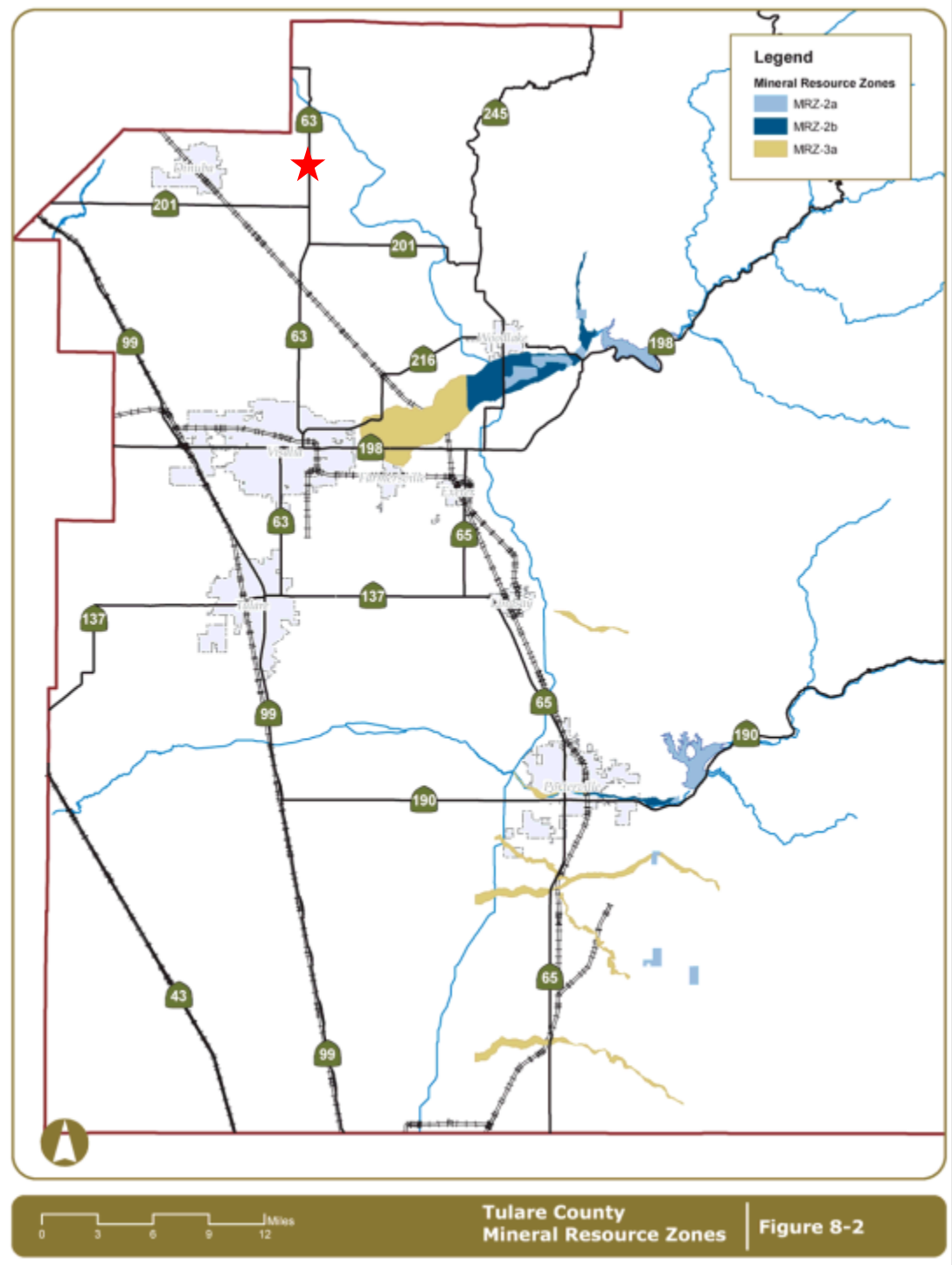
E. MRZ-3b—Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ- 3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An example of a MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure which indicates the possible presence of a

mineral deposit or that an ore-forming process was operative

F. MRZ-4—Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories."[4]

[4] California Department of Conservation. Division of Mines and Geology. "Guidelines for Classification and Designation of Mineral Lands." Pages 5 & 6. Accessed July 2021 at: http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf.

Figure 3.12-1
Mineral Resource Zones
★ = Cutler-Orosi Planning Area



REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

Surface Mining and Reclamation Act of 1975 (SMARA)

"The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act, (Government Code) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state's mineral resources. Public Resources Code Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations."[5]

State Mining & Geology Board (SMGB)

"The SMGB serves as a regulatory, policy, and appeals body representing the State's interests in geology, geologic and seismologic hazards, and conservation of mineral resources and reclamation of lands following surface mining activities. The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act."[6]

The Office of Mine Reclamation (OMR)

"In 1991, the Division of Mine Reclamation (DMR) was created to provide a measure of oversight for local governments as they administer the Surface Mining and Reclamation Act (SMARA) within their respective jurisdictions. While the primary focus is on existing mining

[5] SMARA Description, http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx
[6] State Mining & Geology Board (SMGB), http://www.conservation.ca.gov/smgb/Pages/Index.aspx

operations and the return of those mined lands to a usable and safe condition, issues relating to abandoned legacy mines are addressed through the Abandoned Mine Lands Unit."[7]

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-2.1 Conserve Mineral Deposits - The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.

ERM-2.2 Recognize Mineral Deposits - The County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits.

ERM-2.3 Future Resource Development - The County will provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County.

ERM-2.5 Resources Development - The County will promote the responsible development of identified and/or potential mineral deposits.

ERM-2.7 Minimize Adverse Impacts - The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

ERM-2.8 Minimize Hazards and Nuisances - The County will minimize the hazards and nuisances to persons and properties in the area during extraction, processing, and reclamation operations.

ERM-2.9 Compatibility - The County will encourage the development of mineral deposits in a manner compatible with surrounding land uses.

ERM-2.10 Incompatible Development - Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.

ERM-2.11 Conditions of Approval - The County shall establish procedures to ensure compliance with conditions of approval on all active and idle mines.

[7] California Department of Conservation. Office of Mine Regulation. Accessed July 2021 at: https://www.conservation.ca.gov/dmr.

ERM-2.12 Approved Limits - Tulare County will establish procedures to ensure that vested interest mining operations remain within their approved area and/or production limits.

ERM-2.13 SMARA Requirements - All surface mines in the County, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land consistent with the Tulare County General Plan, subsequent to the completion of surface mining activities. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures.

ERM-3.1 Environmental Contamination - All mining operations in the County shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site.

IMPACT EVALUATION

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Project Impact Analysis: ***No Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. The proposed Project area is not located in a known mineral resource zone (MRZ) area identified in the Tulare County General Plan 2030 Update, as such, there will be no loss of availability of a known mineral resource due to Project implementation. Therefore, the Project will result in ***No Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project does not include mining operations and is not located within a known mineral resource zone. As such, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Project Impact Analysis: ***No Impact***

As noted in the Response to 3.11 a), the proposed Project does not include a mining operation and the proposed Project site is not located in or near a known mineral resource zone. There will be no significant loss of local important mineral resource recovery site. According to U.S. Geological Survey, the nearest active mine and mineral production plant to the proposed Project is Kaweah River Rock (located approximately 15 miles southeast of the proposed Project Planning Area)[8]. The proposed Project will not create any project specific impacts related to this resource. As such, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted in the Response to Item 3.11 a), the proposed Project does not include mining operations and is not located within a mineral resource zone. As such, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

[8] USGS Mineral Resources On-Line Spatial Data. Active mines and mineral plants in the US. http://mrdata.usgs.gov/mineral-resources/active-mines.html. Accessed June, 2014.

DEFINITIONS/ACRONYMS

Acronyms

MRZ	Mineral Resource Zone
OMR	Office of Mine Reclamation
SMGB	State Mining & Geology Board
SMARA	Surface Mining and Reclamation Act

REFERENCES

California Department of Conservation. Division of Mines and Geology. "Guidelines for Classification and Designation of Mineral Lands." Accessed July 2021 at: http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf.

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Noise
Chapter 3.13

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impact With Mitigation*** related to the Noise resource through the Year 2030 Planning horizon. A Noise Study Report conducted by consultants VRPA Technologies is included as Appendix "D" of this document which is used as the basis for determining this Project will result in a less than significant impact. As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts related to Noise. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate

any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Noise Setting in Tulare County. The regulatory setting provides a description of applicable Federal, State, and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Exceed Tulare County Standards for Noise Levels
- Expose people of excessive groundborne vibration
- Expose people to excessive airport/airstrip noise

ENVIRONMENTAL SETTING

As summarized in the NSR, "The Cutler-Orosi community is located in the San Joaquin Valley, approximately 13 miles north of the City of Visalia. The community is located in the northeastern portion of Tulare County at an elevation of 366 feet above sea level. Figure 1-1 [in the NSR] shows the Cutler-Orosi community in the context of its region. The transportation system within the planning area includes State Route (SR) 63 and 201 in addition to several County routes and a grid of local streets as shown in Figure 1-2 [in the NSR]. Tulare County is one of eight counties that comprise the San Joaquin Valley, which is bounded on the west by the Coast Range Mountains, on the east by the Sierra Nevada Mountains, on the south by the Tehachapi Mountains, and on the north by the Sacramento River Delta area."[2]

Existing Roadway Network

"Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and highways do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads.

The following are general descriptions of the roadway types shown in the Cutler-Orosi Communities:

[1] CEQA Guidelines, Section 15126.2 (a)

[2] Draft Cutler-Orosi Community Plan 2021 Update. Noise Study Report. June 2020. Pages 1 and 4. Prepared by VRPA Technologies and included in Appendix "D" of this DEIR.

State Freeways (which may be freeways, expressways, or conventional highways) – Connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas.

State Route (SR) 63 is the principle state highway serving the Cutler-Orosi Community. SR 63 primarily exists as an undivided four-lane road without bike lanes throughout Cutler-Orosi Community. On-street parking is currently permitted on the four-lane segments. The posted speed limit is generally 35-40 mph throughout the community (except for school zones with a posted speed of 25 mph). The posted speed limit outside of these communities is generally 55 mph. According to Caltrans' website, the average annual daily traffic (AADT) along SR 63 in the study area was approximately 12,100 south of Avenue 416 and 7,300 south of Avenue 400 in 2017.

Arterials – Serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.

Avenue 416 (west of Road 130) – currently an undivided four-lane minor arterial without bike lanes, with a posted speed limit of 25 and 40 mph through the study area.

Collectors – Provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers and limited direct access to abutting properties.

Avenues 408, 413, 419, and 422 are classified as collector streets in the study area.

Local Streets – Provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas."[3]

The Noise Study Report (NSR or Cutler-Orosi NSR, see Appendix "D") prepared by consultants VRPA Technologies described all the necessary components of noise impacts necessary to provide a CEQA–based evaluation. A description and discussion of the community, the street and highway system, existing circulation and traffic conditions (see pages 1-3 of the NSR), technical background regarding sound and noise evaluation (such as sound and the human ear, decibels, sound pressure, sound/noise/acoustics, frequency/hertz, etc. (see pages 4-8 of the NSR)), methodology, applicable governmental codes and policies, study methods and procedures (such as site selection and noise level measurement procedures (see pages 8-10 of the NSR), existing conditions, future year conditions, vibration (see pages 12-21 of the NSR), standards of significance and CEQA environmental checklist questions have all been addressed in the NSR

[3] Ibid. 1 and 4.

(see pages 23-28 of the NSR). The complete NSR is included in Appendix "D" and some excerpts have been incorporated into this analysis.

Methodology

As described in the NSR, "When preparing an NSR, guidelines set by affected agencies must be followed. Acoustical terminology used for this NSR is documented in Appendix A. In analyzing noise levels, the FHWA Highway Traffic Noise Prediction methodology must be applied. Safety concerns must also be analyzed to determine the need for appropriate mitigation resulting from increased noise due to increased traffic and other evaluations such as the need for noise barriers and other noise abatement improvements. Unless otherwise stated, all sound levels reported are in A-weighted decibels (dBA). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards use A-weighting, as it provides a high degree of correlation with human annoyance and health effects."[4]

California Environmental Quality Act

"CEQA requires a strictly no-build versus build analysis to assess whether a project will have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible."[5]

Tulare County

"The Health and Safety section of Tulare County's 2030 General Plan serves as the primary policy statement for the County for implementing policies to maintain and improve the noise environment in Tulare County. The Health and Safety section presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of Tulare County's noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.

Table 1-1 [in the NSR, **Table 3.13-1** in this Draft EIR] shows Tulare County's Land Use Compatibility for Community Noise Environments. During preparation of this NSR, conformance of the proposed amendment with the Land Use Compatibility for Community Noise Environments is used to evaluate potential noise impacts and provides criteria for environmental impact findings and conditions for project approval."[6]

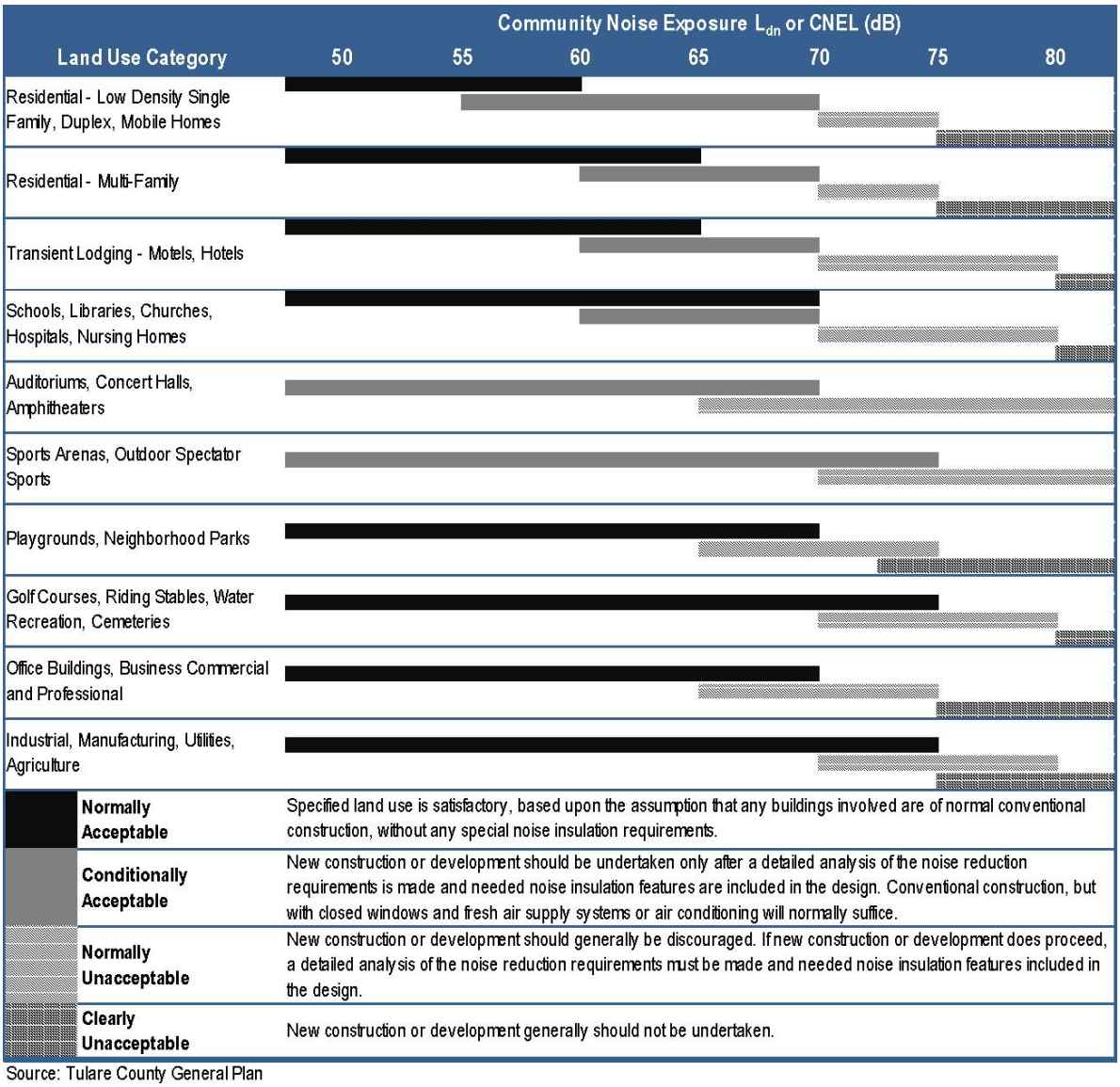
Study Methods and Procedures

[4] Op. Cit. 9-10.
[5] Op. Cit. 10.
[6] Op. Cit.

Site Selection

"Developed and undeveloped land uses in the project vicinity were identified through land use maps, aerial photography, site inspection, and Tulare County staff recommendations. Within each land use category, sensitive receptors were then identified. Land uses in the project vicinity include single-family residences, commercial, office, recreational, and industrial uses. The generalized land use data and location of particular sensitive receptors were the basis for the selection of the noise monitoring and analysis sites."[7]

Figure 3.13-1
Tulare County Land Use Compatibility for Community Noise Environments



Source: Tulare County General Plan

[7] Op. Cit.

Noise Level Measurement Program

"Existing noise levels in the Cutler-Orosi community were sampled during the PM peak hour because traffic counts conducted in the study area show a greater volume of traffic in the PM peak hour than the AM peak hour. All measurements were made using an Extech Type 2 sound level meter datalogger.

The following measurement procedure was utilized:

- ✓ Calibrate sound level meter.
- ✓ Set up sound level meter at a height of 1.5 m (5 ft).
- ✓ Commence noise monitoring.
- ✓ Collect site-specific data such as date, time, direction of traffic, and distance from sound level meter to the center of the roadway.
- ✓ Count passing vehicles for a period of 5 minutes.
- ✓ Stop measurement after 5 minutes."[8]

Existing Conditions

The NSR prepared by VRPA introduces noise from mobile and stationary sources as: "Noise can generally be described as unwanted sound and has been cited as being a health problem, not just in terms of actual physiological damages such as hearing impairment, but also in terms of inhibiting general wellbeing and contributing to stress and annoyance. Long or repeated exposure to sounds at or above 85 decibels can cause hearing loss. The louder the sound, the shorter the time period before hearing loss can occur. Sounds of less than 75 decibels are unlikely to cause hearing loss even after long exposure.

Existing noise levels in the Cutler-Orosi Communities are principally generated by transportation noise sources. Vehicular traffic noise is the dominant source in most areas, but amplified sound generated from commercial sites are also sources of environmental noise in the local areas surrounding these operations. Noise can be generated by either mobile or stationary sources.

- ✓ Mobile source noise is typically associated with transportation, such as cars, trains, and aircraft. The most significant mobile source of noise in the Cutler-Orosi Communities is Road 128 (Route 63) that runs through the community center.

- ✓ Stationary noise sources are any 'fixed' noise generating source. Examples of stationary sources include outdoor machinery (i.e. such as heating/air conditioning systems) and amplified events. Noise generated from construction sites also falls into the category of stationary sources."[9]

[8] Op. Cit. 10-11.
[9] Op. Cit. 12.

Traffic Noise

Highway and roadway traffic noise levels are generally dependent upon three primary factors, which include the traffic volume, the traffic speed, and the percent of heavy vehicles on the roadway. Traffic generated noise is the result of vehicle engines, exhaust, tires, and wind generated by taller vehicles. Vehicles with defective mufflers or faulty equipment have the propensity to increase traffic noise. Traffic noise levels are reduced by distance, terrain, vegetation, and natural/manmade obstacles as noise receptors move away from the highway/roadway.

To assess existing noise conditions, VRPA Technologies staff conducted noise level measurements within the Cutler-Orosi Community and tabulated the results. The weather during the time of the noise measurements consisted of fair-weather conditions with wind speeds of less than 5 mph. The purpose of the measurements was to evaluate existing noise levels in the study area and to calibrate the Federal Highway Administration (FHWA) Traffic Noise model, which will be used to assess future year traffic conditions.

A total of three (3) field receptors (noise monitoring sites) were evaluated in the Cutler-Orosi area. These field receptor locations are shown in Figure 2-1 [in the NSR, **Figure 3.13-2** in this Draft EIR]. Table 2-1 [in the NSR, **Table 3.13-1** in this Draft EIR] characterizes the results of the existing noise conditions at the three (3) field receptors evaluated in the study area. The sound monitoring was performed at locations near existing sensitive receptors.

One (1) additional receptor along the SR 63 (Road 128) corridor was evaluated in the TNM 2.5 model and results are depicted in Table 2-1 [in the NSR, **Table 3.13-1** in this Draft EIR]. These modeled receptor locations are shown in Figure 2-1 [in the NSR, **Figure 3.13-2** in this Draft EIR].

The results shown in Table 2-1 [in the NSR, **Table 3.13-1** in this Draft EIR] were used to develop the traffic noise exposure levels at various setbacks to achieve 60, 65, 70, 75, and 80 Ldn dB. Table 2-2 [in the NSR, **Table 3.13-1** in this Draft EIR]shows the anticipated noise levels for each roadway evaluated within the study area. In general, SR 63 carries a majority of the traffic in the Cutler-Orosi Community on a daily and peak hour basis.

Traffic noise exposure is mainly a function of the number of vehicles on a given roadway per day, the speed of those vehicles, the percentage of medium and heavy trucks in the traffic volume, and the receiver's proximity to the roadway. Every vehicle passage on every roadway in the community radiates noise.

Existing high noise levels along major streets and highways are generally caused by traffic and congestion. Potential impacts along these facilities are generally classified as follows:

- ✓ Low - Ldn 59 dB or below
- ✓ Moderate - Ldn 60 dB to 65 dB
- ✓ High - Ldn 66 dB or greater

The potential for adverse noise impacts is generally moderate to high along most segments of State highways and is generally low to moderate along most segments of community streets.

Figure 3.13-2
Noise Receptor Locations

Results of the analysis, as documented in Table 2-1 [in the NSR, **Table 3.13-1** in this Draft EIR] and Table 2-2 [in the NSR, **Table 3.13-2** in this Draft EIR], shows that existing noise levels in the Cutler-Orosi community do not exceed Tulare County's Land Use Compatibility for Community Noise Environments. The sensitive land uses represented by Receiver's 1, 3, and 4 currently experience noise levels at 60 Ldn dB, which is the maximum noise level for the residential land use."[10]

Table 3.13-1
Existing Traffic Noise Levels

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Existing Noise Level Ldn dB	Tulare County Noise Standard Ldn dB
1	Residential Development along SR 63 (Road 128), north of Avenue 419	100	60.0	60.0
2	Residential Development along Avenue 416, east of SR 63 (Road 128)	90	56.0	60.0
3	Residential Development along Road 124, south of Avenue 416	55	60.0	60.0
4	Residential Development/School along SR 63 (Road 128), north of Avenue 404	100	60.0	60.0

Table 3.13-2
Traffic Noise Contours

STREET SEGMENT	SEGMENT DESCRIPTION	DISTANCE TO CONTOUR (feet)				
		80 L_{dn} dB	75 Ldn dB	70 Ldn dB	65 Ldn dB	60 Ldn dB
SR 63 (Road 128)						
Avenue 419 to Avenue 416	4 lanes Undivided	14	22	37	61	100
Avenue 416 to Avenue 400	4 lanes Undivided	14	22	37	61	100
Avenue 416						
SR 63 (Road 128) to Road 136	4 lanes Undivided	8	13	22	37	60
Road 124						
South of Avenue 416	2 lanes Undivided	7	12	20	33	55

[10] Op. Cit. 12-13.

Stationary Noise

"Industrial and agricultural land uses in the Cutler-Orosi community are the primary source of stationary noise in the community. In general, noise generated from the existing development in the community is not substantial enough to cause a nuisance to residents, employees, or patrons of the community."[11]

Regulatory Setting

Federal Agencies & Regulations

Federal Highways Administration (FHWA) Highway Traffic Noise Prediction methodology

"In March 1998, the Federal Highway Administration (FHWA) released the Traffic Noise Model, Version 1.0 (FHWA TNM®). It was developed as a means for aiding compliance with policies and procedures under FHWA regulations. Since its release in March 1998, Version 1.0a was released in March 1999, Version 1.0b in August 1999, Version 1.1 in September 2000, Version 2.0 in June 2002, Version 2.1 in March 2003 and the current version, Version 2.5 in April 2004. The FHWA TNM is an entirely new, state-of-the-art computer program used for predicting noise impacts in the vicinity of highways. It uses advances in personal computer hardware and software to improve upon the accuracy and ease of modeling highway noise, including the design of effective, cost-efficient highway noise barriers."[12]

Federal Aviation Administration (FAA)

"Aircraft operated in the U.S. are subject to certain federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines."[13]

Federal Railway Administration (FRA) and the Federal Transit Administration (FTA)

"The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to groundborne vibration levels of 0.5 Peak Particle Velocity (PPV) without experiencing structural damage. The FTA has identified the human annoyance response to

[11] Op. Cit. 13.

[12] United States Department of Transportation. Federal Highway Administration. Traffic Noise Model. Accessed July 2021 at: http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/

[13] 2018 TCAG RTP/SCS Program EIR. Page 4.8-17. Accessed July 2021at: https://tularecog.org/tcag/planning/rtp/rtp-20181/environmental-impact-report/

vibration levels as 80 VdB."[14]

State Agencies & Regulations

California Noise Insulation Standards

"The California Noise Insulation Standards found in the California Code of Regulations, Title 24, set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is DNL 45 dB in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB."[15]

California's Airport Noise Standards

"The State of California has the authority to establish regulations requiring airports to address aircraft noise impacts on land uses in their vicinities. The State of California's Airport Noise Standards, found at 21 California Code of Regulations section 5000 et seq., identify a noise exposure level of CNEL 65 dBA as the noise impact boundary around airports. Within the noise impact boundary, airport proprietors are required to ensure that all land uses are compatible with the aircraft noise environment or the airport proprietor must secure a variance from the California Department of Transportation."[16]

California Department of Transportation (Caltrans)

"The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state passby standard is consistent with the federal limit of 80 dBA at 15 meters from the centerline. The state passby standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dBA at 15 meters from the centerline. For new roadway projects, Caltrans employs the Noise Abatement Criteria, discussed above in connection with FHWA.

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed 52 dBA Leq in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below 52 dBA Leq. If the noise levels generated from freeway and non-freeway sources exceed 52 dBA Leq prior to

[14] Tulare County Association of Governments 2018 Regional Transportation Plan/Sustainable Communities Draft EIR. Page 4.8-17. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/environmental-impact-report/
[15] Ibid. 4.8-21.
[16] Op. Cit. 4.8-19.

the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project."[17]

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

HS-8.1 Economic Base Protection - The County shall protect its economic base by preventing the encroachment of incompatible land uses on known noise-producing industries, railroads, airports, and other sources.

HS-8.2 Noise Impacted Areas - The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

HS-8.3 Noise Sensitive Land Uses - The County shall not approve new noise sensitive uses unless effective mitigation measures are incorporated into the design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces.

HS-8.4 Airport Noise Contours - The County shall ensure new noise sensitive land uses are located outside the 60 CNEL contour of all public use airports.

HS-8.5 - State Noise Standards - The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multi-family dwellings, condominiums, hotels, or motels. Where it is not possible to reduce exterior noise levels within an acceptable range the County shall require the application of noise reduction technology to reduce interior noise levels to an acceptable level.

HS-8.6 Noise Level Criteria - The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).

HS-8.8 Adjacent Uses - The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County.

[17] Op. Cit. 4.8-20.

HS-8.9 County Equipment - The County shall strive to purchase equipment that complies with noise level performance standards set forth in the Health and Safety Element.

HS-8.10 Automobile Noise Enforcement - The County shall encourage the CHP, Sheriff's office, and local police departments to actively enforce existing sections of the California Vehicle Code relating to adequate vehicle mufflers, modified exhaust systems, and other amplified noise.

HS-8.11 Peak Noise Generators - The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.13 Noise Analysis - The County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses. The noise analysis shall be the responsibility of the project applicant and be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California, etc.). The analysis shall include recommendations and evidence to establish mitigation that will reduce noise exposure to acceptable levels (such as those referenced in Table 10-1 of the Health and Safety Element).

HS-8.14 Sound Attenuation Features - The County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts.

HS-8.15 Noise Buffering - The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.

HS-8.16 State Noise Insulation -
The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

LU-1.3 Prevent Incompatible Uses - The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.

Cutler-Orosi Community Plan Policies

The intent of the Goshen Community Noise Element is to provide a policy framework for addressing potential noise impacts encountered in the planning process. The goals and policies outline below are consistent with Tulare County policies.

Goal 2: Provide designated routes and loading standards that reduce the noise and safety concerns associated with truck traffic.

Policies and Standards:

1. Designate truck routes for use by heavy commercial and industrial traffic. Initially, designated truck routes shall be:
    - SR 63
    - SR 201
    - Avenue 416
2. Design interior street systems for commercial and industrial subdivisions to accommodate the movement of heavy trucks.
3. Restrict heavy-duty truck through-traffic in residential areas and plan land uses so that trucks do not need to traverse these areas.

Design off-street loading facilities for all new commercial and industrial developments so that they do not face surrounding roadways or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted by the County Engineer.

Goal 9: Design, construct, and operate the transportation system in a manner that maintains a High level of environmental quality.

Policies and Standards:

2. Protect residents from transportation generated noise hazards. Increased setbacks, walls, landscaped berms, other sound absorbing barriers, or a combination thereof shall be provided along four lane highways in order to protect adjacent noise-sensitive land uses from traffic generated noise impacts. Additionally, noise generators such as commercial, manufacturing, and/or industrial activities shall use these techniques to mitigate exterior noise levels to no more than 60 decibels.

5. Include noise mitigation measures in the design of roadway projects in Cutler-Orosi.

IMPACT EVALUATION

Would the project:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Project Impact Analysis: ***Less Than Significant Impact***

Long-Term Impacts

The NSR concluded that the Project would result in a less than significant impact. "Future development within the Planning Area will result in increased traffic volumes, thus increasing noise levels in some areas. Tables 2-1, 2-2, 3-1, 3-2, and 3-3 [in the NSR, **Tables 3.13-1, 3.13-2, 3.13-3** and **3.13-4**; respectively, in this Draft EIR] show the existing and Future Year 2040 predicted noise levels at the sensitive land uses evaluated in the study area. The results indicate that the changes in noise levels as a result of the community plan update are insignificant. The Cutler-Orosi Community Plan Update will result in a maximum increase of 2 decibels when compared to existing conditions. According to the Caltrans Technical Noise Supplement, the average healthy ear can barely perceive noise level changes of 3 dBA. As a result, it is anticipated that the Cutler-Orosi Community Plan Update will not expose persons to or generate noise levels in excess of standards in the local noise ordinance, or applicable standards of other agencies. It should also be noted that there are minimal changes in the traffic noise exposure levels at various setbacks of 60, 65, 70, 75, and 80 Ldn dBA for the major roadways within the Cutler-Orosi community as shown in Tables 2-2, 3-2, and 3-3 [in the NSR, **Tables 3.13-2, 3.13-3** and **3.13-4**; respectively, in this Draft EIR]. The Cutler-Orosi Community Plan Update will not significantly impact noise levels within the community when compared to existing conditions."[18]

Short-Term Impacts

"Construction noise represents a short-term impact on ambient noise levels. Although most of the types of exterior construction activities associated with growth in the Cutler-Orosi Community will not generate continually high noise levels, occasional single-event disturbances from grading and construction activities are possible. Table 4-1 [in the NSR, **Table 3.13-5** in this Draft EIR] depicts typical construction equipment noise. Construction equipment noise is controlled by the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

During the construction phase of any future development projects, noise from construction activities will add to the noise environment in the immediate area. Activities involved in

[18] *"Cutler-Orosi Community Plan Update. Noise Study Report."* June 2020. Page 24. Prepared by VRPA Technologies and included in Appendix "D" of this DEIR.

construction would generate maximum noise levels, as indicated in Table 4-1 [in the NSR, Table 3.13-5 in this Draft EIR], ranging from 77 to 85dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used.

In order to reduce potential construction noise impacts to sensitive receptors, all future development projects should comply with the following measure:

The hours of future construction on the Project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required."[19]

[19] Ibid.

Table 3.13-3
Future Year 2040 Traffic Noise Levels

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Future Year 2040 No Build Noise Level Ldn dB	Future Year 2040 Plus Build Noise Level Ldn dB	Noise Increase or Decrease (-)	Tulare County Noise Standard Ldn dB
1	Residential Development along SR 63 (Road 128), north of Avenue 419	100	62.0	62.0	0.0	60.0
2	Residential Development along Avenue 416, east of SR 63 (Road 128)	90	58.0	58.0	0.0	60.0
3	Residential Development along Road 124, south of Avenue 416	55	62.0	62.0	0.0	60.0
4	Residential Development / School along SR 63 (Road 128), north of Avenue 404	100	62.0	62.0	0.0	60.0

Source: VRPA Technologies, 2020.

Table 3.13-4
Future Year 2040 No Build Traffic Noise Levels

Street Segment	Segment Description	Distance to Contour (fee)				
		80 L_{dn} dB	75 L_{dn} dB	70 L_{dn} dB	65 L_{dn} dB	60 L_{dn} dB
SR 63 (Road 128)						
Avenue 419 to Avenue 416	4 lanes Undivided	17	27	45	74	122
Avenue 416 to Avenue 400	4 lanes Undivided	17	27	45	74	122
Avenue 419						
SR 63 (Road 129) to Road 136	4 lanes Undivided	10	16	27	45	74
Road 142						
South of Avenue 416	2 lanes Undivided	9	15	25	41	67

Source: VRPA Technologies, 2020.

"The Tulare County Development Department is responsible for processing approvals of site plans that implement conditions of approval. Any improvement plans reviewed by the County should contain the provisions as listed above. The Tulare County Community Development Department is also responsible for ensuring that the mitigation measures are complied with prior to the issuance of any construction permits."[20]

Table 3.13-5
Construction Equipment Noise[21]

TYPE OF EQUIPMENT	Sound Levels Measured (dBA of 50 feet)
Rock Drills	85
Jack Hammers	85
Pneumatic Tools	85
Pumps	77
Dozers	85
Tractor	84
Front-End Loaders	80
Hydraulic Backhoe	80
Hydraulic Excavators	85
Graders	85
Air Compressors	80
Trucks	84

Source: Noise Control for Buildings and Manufacturing Plants (Bolt, Beranek and Newman, 1987).

Significance After Mitigation

"The responsibility to approve land use development consistent with the general plan rests with Tulare County and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid significant impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. The implementation of the above-notated mitigation strategies [see **Mitigation Measures 3.13-1** through **3.13-8**] is intended to avoid significant impacts."[22]

[20] Ibid.
[21] Ibid. 25.
[22] Op. Cit. 26. Table 4-1 Page 25.

The RMA agrees with the conclusions contained within and supported in the NSR prepared by qualified expert consultant VRPA Technologies, Inc. Therefore, implementation of **Mitigation Measures 3.13-1** through **3.13-8** would result in a ***Less Than Significant Impact*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

As indicated in the NSR; "With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report:

- ✓ Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- ✓ Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- ✓ A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- ✓ A 10 dB change is subjectively heard as approximately a doubling in loudness."[23]

As shown in **Table 3.13-1**, only Receptor site 2 (Residential Development along Avenue 416, east of SR 63 (Road 128) is currently below (58 Ldn dB) and anticipated to remain below the County's noise standard (60 Ldn dB); Receptors 1, 3, and 4 exceed (62 Ldn dB) and are anticipated to remain above the County's noise standard (60 Ldn dB) to Year 2040 which is beyond the Year 2030 Planning horizon of the Community Plan Update. Therefore, there will be no noise increases and no perceivable differences of noise at all Receptor sites as a result of the Project.

As future development occurs, **Mitigation Measures 3.13-1** through **3.13-8** can be implemented, as applicable. As such, a ***Less Than Significant Cumulative Impact*** would occur through the Year 2030 Planning horizon.

[23] Op. Cit. 5

Mitigation Measure(s): ***See Mitigation Measures 3.13-1 through 3.13-8.***

"No specific significant impacts were identified as part of this noise analysis. However, the specific impacts on noise will be evaluated as part of the County's project-level environmental review process for future land use development(s). Tulare County will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. The mitigation measures referenced below (numerated versus the format contained in the NSR) should be implemented for all future land use development projects:

3.13-1 Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.

3.13-2 Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.

3.13-3 To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.

3.13-4 Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.

3.13-5 To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.

3.13-6 To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.

3.13-7 Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors."[24]

3.13-8 "The hours of future construction on the Project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is

[24] Op. Cit. 25-25.

taking place. If residential uses are beyond 300 feet limited work hours are not required."[25]

Conclusion: ***Less Than Significant Impact***

As noted earlier, the analysis indicates that ***Less Than Significant Project-specific and Cumulative Impacts*** would occur related to the Noise resource.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Project Impact Analysis: ***Less Than Significant Impact***

"Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. The most common exterior sources of ground vibration that can be noticeable to humans inside residences include constructions activities, train operations, and street traffic. Table 3-4 [in the NSR, included n Appendix "D" of this Draft EIR] provides some common sources of ground vibration and the relationship to human perception. This information comes from the Federal Transit Administration's "Basic Ground-Bourne Vibration Concepts."[26]

"Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures, but can cause low rumbling sounds and feelable vibrations for buildings very close to the site.

Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Vibration levels from various types of construction equipment are shown in Table 3-5 [in the NRS, **Table 3.13-6** in this Draft EIR]. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions."[27]

"Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not significant unless the vibration exceeds 75 VdB according to the United States Department of

[25] Op. Cit, 24.
[26] Op. Cit. 19.
[27] Op. Cit.

Transportation. In order to estimate the impact of vibrations from construction activities at distances of 100 feet, 150 feet, and 200 feet, the following formula was applied.

$Lv(D) = Lv(25\ ft) - 20 \log (D/25)$

Using the highest vibration level shown in Table 3-5 (Lv 87) and the formula shown above, the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Cutler-Orosi Community Plan Update would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 3-5 [in the NRS, **Table 3.13-6** in this Draft EIR], ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB."[28]

Table 3.13-6
Vibration Source Levels for Construction Equipment[a]

Equipment	PPV at 25 ft. (in/sec)	Approximate L_v*at25 ft.
Large bulldozer	0.089	87
Caissson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[a] From NRS Table 3-5, included in Appendix "D" of this draft EIR.
** RMS velocity in decibels (VdB) re 1 minch/second*

Mitigation Measure(s): ***See Mitigation Measures 3.13-1 through 3.13-8.***

"No specific significant impacts were identified as part of this noise analysis. However, the specific impacts on noise will be evaluated as part of the County's project-level environmental review process for future land use development(s). Tulare County will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction."[29] **Mitigation Measure 3.13-1** through **3.13-8**, as applicable, should be implemented for all future land use development projects:

As stated in the NSR, "The responsibility to approve land use development consistent with the general plan rests with

[28] Op. Cit. 21.
[29] Op. Cit. 27.

Tulare County and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid significant impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. The implementation of the above-notated mitigation strategies is intended to avoid significant impacts."

The RMA agrees with the conclusions contained within and supported in the NSR prepared by qualified expert consultant VRPA Technologies, Inc. Therefore, implementation of **Mitigation Measures 3.13-1** through **3.13-8** would result in a ***Less Than Significant Impact*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

As noted earlier, the analysis indicates that ***Less Than Significant Project-specific and Cumulative Impacts*** would occur related to this resource through the Year 2030 Planning horizon.

Conclusion: ***Less Than Significant Impact***

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Project Impact Analysis: ***No Impact***

The Project Planning Area is not within the vicinity of a private airstrip or an airport land use plan area and it is not located within two miles of a public airport or public use airport. As such, there will be ***No Impact*** to this resource.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, The proposed Project is not within the vicinity of a private airstrip or an airport land use plan area and it is not located within two miles of a public airport or public use airport. ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-Specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS & ABBREVIATIONS

Definitions

"In technical terms, sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Simply, sound is what we hear. Noise is defined as unwanted sound. As sounds reach undesirable unacceptable levels, this is referred to as noise"[30]

Ambient Noise - "The total noise associated with a given environment and usually comprising sounds from many sources, both near and far.

Attenuation - Reduction in the level of sound resulting from absorption by the topography, the atmosphere, distance, barriers, and other factors.

A-weighted decibel (dBA) - A unit of measurement for noise based on a frequency weighting system that approximates the frequency response of the human ear.

Community Noise Equivalent Level (CNEL) - Used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. Leq values (equivalent sound levels measured over a 1-hour period - see below) for the evening period (7:00 p.m. to 10:00 p.m.) are increased by 5 dB, while Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) are increased by 10 dB. For a given set of sound measurements, the CNEL value will usually be about 1 dB higher than the Ldn value (see below). In practice,

[30] Tulare County General Plan 2030 Update. Background Report. Page 8-45. Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.

CNEL and Ldn are often used interchangeably.

Decibel (dBA) - A unit of measurement describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure (which is 20 micronewtons per square meter).

Day-Night Average Sound Level (Ldn) - Average sound exposure over a 24-hour period. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises."

Equivalent Sound Level (Leq). - The level of a steady-state sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound (approximately equal to the average sound level). The equivalent sound level measured over a 1-hour period is called the hourly Leq or Leq (h).

Lmax and Lmin - The maximum and minimum sound levels, respectively, recorded during a measurement period. When a sound meter is set to the "slow" response setting, as is typical for most community noise measurements, the Lmax and Lmin values are the maximum and minimum levels recorded typically for 1-second periods.

Percentile-Exceeded Sound Level (Lx) - The sound level exceeded during a given percentage of a measurement period. Examples include L10, L50, and L90. L10 is the A-weighted sound level that is exceeded 10% of the measurement period, L50 is the level exceeded 50% of the period, and so on. L50 is the median sound level measured during the measurement period. L90, the sound level exceeded 90% of the time, excludes high localized sound levels produced by nearby sources such as single car passages or bird chirps. L90 is often used to represent the background sound level. L50 is also used to provide a less conservative assessment of the background sound level.

Sensitive Receptors - Sensitive receptors are defined to include residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses."[31]

Acronyms

ACEP	Agricultural Conservation Easement Program
BMPs	Best Management Practices
CEQA	California Environmental Quality Act
CARB or ARB	California Air Resources Board
CNEL	Community Noise Equivalent Level
CONC	California Office of Noise Control
dB	Decibel
FEMA	Federal Emergency Management Agency

[31] Tulare County General Plan 2030 Update. Background Report. Pages 8-46 to 8-47.

GHG	Greenhouse Gas
HDB	Hamlet Development Boundary
JDF	Juvenile Detention Facility
Leq	Equivalent Sound Level
Ldn	Day-Night Average Sound Level
LOS	Level of Service
NPDES	National Pollution Discharge Elimination System
RMA	Tulare County Resource Management Agency
SJVAPCD	San Joaquin Valley Air Pollution Control District
TCAG	Tulare County Association of Governments
TCFD	Tulare County Flood Control District (TCFD)
UAB	Urban Area Boundary
UC	University of California
UDB	Urban Development Boundary
US EPA (or EPA)	United States Environmental Protection Agency

REFERENCES

California Department of Transportation (Caltrans). *"Betty Drive Interchange Project 06-TUL-99-PM 39.6/41.3 06-471500 06-0000-0464 Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment."* Accessed August 2021 at: http://www.dot.ca.gov/dist6/environmental/envdocs/d6/SR99TUL_BettyDrive063011.pdf

California Natural Resources Agency. California Environmental Quality Act (CEQA) Guidelines. Accessed August 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Included in Appendix "F" of this Draft EIR.

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Tulare County Association of Governments 2018 Regional Transportation Plan/Sustainable Communities Draft EIR. Accessed August 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/environmental-impact-report/

United States Department of Transportation. Federal Highway Administration. Traffic Noise Model. Accessed August 2021 at: http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/

Population and Housing
Chapter 3.14

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in ***Less Than Significant Impacts*** related to Population and Housing through the Year 2030 Planning horizon and therefore, no mitigation measures are required. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Population and Housing. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to

hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Population and Housing in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Induce Substantial Population Growth
- Displace Housing or People

ENVIRONMENTAL SETTING

"Cutler-Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the county seat. Both communities are located along State Route (SR) 63 about one half mile apart. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler. The communities are situated at the base of the Sierra Nevada Mountain foothills.

Cutler is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses 0.8 square miles of land. Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses 2.4 square miles of land. It is directly served by State Route (SR) 63. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast."[2]

[1] CEQA Guidelines. Section 15126.2(a).

[2] Draft Cutler-Orosi Community Plan 2021 Update. Pages 22-23.

Historical Perspective

"Cutler and Orosi are surrounded by agricultural lands. Crops grown on these lands include field crops, deciduous fruit orchards and vineyards. Unlike many Valley communities, there is little rural residential development (1 to 5 acre homesites) surrounding either community.

Cutler is bisected north and south by SR 63. It was bounded on the south by the [former] Atchison Topeka Santa Fe Railroad [tracks] and agricultural land, on the north and east by agricultural land, and on the west by the railroad, the wastewater treatment plant and two major packinghouses. The western half of Cutler is almost fully developed, whereas the eastern half is less than 50 percent urbanized. The Atchison Topeka Santa Fe Railroad tracks that bounded Cutler to the south is now abandoned right-of-way. The railroad tracks and crossties were removed. The cobble and gravel covered railbed and footprint of the former railroad are still visible. Low-lying grass and vegetation have grown in and along the railbed.

Residential development has occurred on the east side of Cutler. Development to the south and southeast has been restricted by a number of features, including the railbed footprint, the treatment plant, industry, and lands under the Williamson Act. To the north, development has historically been restricted by flooding from Sand Creek. Commercial development is concentrated along both sides of SR 63, while industrial uses are situated along the railbed footprint.

State Route 63 and Avenue 416 divide Orosi into four neighborhood quadrants. Each quadrant supports a mix of single family, mobile home and rural residential development. Almost all the multifamily development is located in the southwest quadrant, except the southeast, support a school. Residential development has occurred in the northeast and southwest quadrants. Development to the south and east has historically been restricted by flooding and irregularly shaped parcels, which are difficult to develop.

Orosi's commercial district is concentrated along SR 63 and the west side of Avenue 416. New Commercial development has been absent in Orosi in recent years. The proximity of Dinuba and Visalia make commercial development in Orosi somewhat risky due to competition from these neighboring communities. Orosi has little industrial development, and what little there is dispersed in the southern part of the community."[3]

Historic Population Growth

"The rate of population growth over a 20-year period, 1960 - 1980, in the unincorporated County and Cutler-Orosi grew from 3,239 to 7,225 persons, an average annual growth rate of 6.1 percent."[4]

[3] Ibid. 26.
[4] Op Cit. 38

"Recent Population Growth

In 2000, Cutler-Orosi's population was 11,809. The population increased to 13,610 by 2017. The male population increased from 7,169 in 2010 to 7,313 in 2017. The female population decreased from 6,574 in 2010 to 6,297 in 2017 (see Table 3 [of the Draft Community Plan Update]).[5]

"Projected Population

The San Joaquin Valley faces major challenges. One concerns how to handle future growth. Population in the Valley is expected to nearly triple by 2050, from 3.6 million to 9.4 million people, the equivalent of adding 11 new towns the size of Fresno to the area. Tulare County (see Table 4 [of the Draft Community Plan Update], **Table 3.14-1** of this Draft EIR)is expected to grow to over 1,000,000 residents by 2050, well over doubling its current population."[6]

Table 3.14-1
Projected Annual Growth Rates[7]

	Historic Growth Rates 1990-2007	**Projected Growth Rates 2007-2030**
County Total	1.9%	2.4%
Incorporated	2.8%	2.9%
Unincorporated	0.46%	1.3%

**Source: Tulare County Blueprint.*

"Growth Rate

As noted in the 2010 General Plan Background Report, the unincorporated areas of Tulare County have a 1.3% projected annual growth rate from 2007 to 2030. This 1.3% annual growth rate is applied to Cutler-Orosi."[8]

"Median Age

The median age in Cutler went up from 23.5 in 2000 to 24.5 in 2017 and in Orosi from 24.6 in 2000 to 28.8 in 2017. Cutler-Orosi's median age is lower than the median age of Tulare County and of the State of California (see Table 5 [of the Draft Community Plan Update, **Table 3.14-2** in this Draft EIR])."[9]

[5] Op Cit. 38.
[6] Op Cit. 39.
[7] Op. Cit. Table 5. Page 39.
[8] Op Cit. 39.
[9] Op Cit.

Table 3.14-2 Median Age (2000 and 2010)		
Geography	**2000**	**2010**
	Median age (years)	**Median age (years)**
California	33.3	36.1
Tulare County	29.2	30.6
Cutler CDP	23.5	24.5
Orosi CDP	24.6	28.8
Source: California Department of Finance		

"Cutler-Orosi has a higher percentage of persons age 18 and under at 38.6% and 32.4%; respectively, than Tulare County (31.4%) and the State of California (23.4%). Cutler-Orosi also has a lower elderly population. Persons 60 years old and older made up 2.0% in Cutler and 4.1% in Orosi, comparatively, persons 60 years and older in Tulare County was 13.2% and in the State of California was 16.4% (see Table 6 [of the Draft Community Plan Update, **Table 3.14-3** in this Draft EIR])."[10]

Table 3.14-3 Age Percentage 2017					
Geography	**Persons Under 5 years**	**Persons Under 18 years**	**Persons Age 21+**	**Persons Age 60+**	**Persons Age 65+**
California	6.4%	23.4%	72.4%	16.4%	13.2%
Tulare County	8.6%	31.4%	63.9%	13.2%	10.7%
Cutler CDP	8.1%	38.6%	57.4%	2.0%	5.4%
Orosi CDP	6.4%	32.4%	63.0%	4.1%	8.0%
Source: California Department of Finance					

"Ethnicity and Race

In 2000 (see Table 7 [of the Draft Community Plan Update, **Table 3.14-4** in this Draft EIR]), 34.5 % of Cutler's and 48.4% of Orosi's population were white, 0.4% for both Cutler-Orosi were African American, 1.2% for Cutler's and 0.5% for Orosi were Native American, 0.8% for Cutler and 10.2% for Orosi were Asian, and 4.5% for Cutler and 5.5% were Orosi were two races or more. Approximately 92.1% for Cutler and 77.6% for Orosi were Hispanic (of any race)."[11]

[10] Op. Cit. 39
[11] Op. Cit. 40.

Table 3.14-4
Race & Ethnicity (2000)

Geography	2000 Total Population	White	Hispanic or Latino (of any race)	Black or African American	American Indian and Alaska Native	Asian	Total Population of Two or More Races
California	33,871,648	20,170,059	10,966,556	2,263,882	333,346	3,697,513	1,607,646
Tulare County	368,021	213,751	186,846	5,852	5,737	12,018	16,938
Cutler CDP	4,491	1,547	4,136	17	53	37	204
Orosi CDP	7,318	2,153	5,679	26	39	747	406
Cutler % of Total	-	34.5%	92.1%	0.4%	1.2%	0.8%	4.5%
Orosi % of Total	-	48.4%	77.6%	0.4%	0.5%	10.2%	5.5%

Source: California Department of Finance

"In 2017 (see Table 8 [of the Draft Community Plan Update, **Table 3.14-5** in this Draft EIR]), 1.6% of Cutler's and 3.3% of Orosi's population were white. Approximately 98.8% of Cutler and 85.58% of Orosi were Hispanic (of any race). Between 2000 and 2017, the proportion of the White population declined in both Cutler-Orosi; from 34.5% to 1.6% and in Cutler, and from 48.4% to 3.3% in Orosi. During this time, the African American population moved away from both Cutler and Orosi. The Asian population percentage increased in Orosi from 0.8% to 10.6% and declined in Cutler from 0.8% to 0.0%. The two or more race demographic declined in both Cutler and Orosi from 4.5% to 0.0% in Cutler and 5.5% to 0.6% in Orosi. The Hispanic (of any race) increased from 92.1% to 98.8% in Cutler, and increased from 77.6% to 85.5% in Orosi."[12]

Table 3.14-5
Race & Ethnicity (2017)

	Total Population	White	Hispanic or Latino (of any race)	Black or African American	American Indian and Alaska Native	Asian	Total Population of Two or More Races
California	37,253,956	21,453,934	14,013,719	2,299,072	362,801	4,861,007	1,815,384
Tulare County	442,179	265,618	268,065	7,196	6,993	15,176	18,424
Cutler CDP	5,850	94	5,756	0	0	0	0
Orosi CDP	7,760	255	6,632	0	0	826	47
Cutler % of Total	-	1.6%	98.8%	0.0%	0.0%	0.0%	0.0%
Orosi % of Total	-	3.3%	85.5%	0.0%	0.0%	10.6%	0.6%

Source: California Department of Finance

[12] Op. Cit. 41

Population Growth Forecast

"The projected Year 2030 combined population of Cutler-Orosi is 16,099 and the projected increase in combined population from 2017 to 2030 is 2,489persons. (see Table 38, 39, and 40 [of the Draft Community Plan Update])."[13] See **Table 3.14-6.**

Table 3.14-6
Cutler-Orosi Population Projections

Growth Rate	2017	2020	2030
Cutler	5,850	6,081	6.920
Orosi	7,760	8,067	9,179
Combined	13,610	14,148	16,099

Demand Forecast

"With the existing 2,441.9 acre Cutler-Orosi Urban Development Boundary, approximately 1,246 acres are urbanized. By dividing the estimated 2030 population of 16,099 by 1,246 urbanized acres, a ratio of 12.92 persons per urbanized acres is calculated. The forecasted increase in population from 2017 to 2030 is 2,489 persons. Projecting this ratio into the future (1,830 persons divided by 12.92) suggests that an additional 198 acres will be needed by the year 2030.

Based on the data and analysis contained above and forecasted population and housing estimates below, the following table includes the year 2030 square footage and residential unit demand forecast for the Cutler-Orosi planning area."[14]

Regional Housing Needs Assessment (RHNA)

"State housing element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated prior to each housing element cycle. The current RHNA, adopted on June 30, 2014, is for the fifth housing element cycle and covers a 9.75-year projection period (January 1, 2014 – September 30, 2023).

The growth projections applied in the Tulare County Housing Element Update are based upon growth projections developed by the State of California. A "Regional Housing Needs Assessment Plan" provides a general measure of each local jurisdiction's responsibility in the provision of housing to meet those needs. The TCAG was responsible for allocating the State's

[13] Op Cit. 176
[14] Op Cit. 177.

projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in the Housing Element."[15]

"The RHNA housing results are summarized in Figure 7A [in the RHNA, **Table 3.14-7** in this Draft EIR]. The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7,081 units per year in the unincorporated portions of the County. The County administratively agreed to a housing share of 7,081 units (726 units per year over the 9.75-year RHNA planning period). The RTP allocates 30% of population to the County. The RHNA bases the housing needs assessment on this percentage."[16]

Table 3.14-7
RHNA 2014-2023

Tulare County Region January 1, 2014 to September 30, 2023								
Jurisdiction	1/1/2014 Housing Unit Control Totals	2023 Housing Unit Control Totals	Estimated 9/30/2023 Housing Units		2024 Housing Unit Control Totals	Housing Units 9/30/2023 (Based on Allocation of 26,910 units)		
			Housing Units	Percent of Total		Total Housing Units	Percent of Total	Net New Housing Units 1/1/2014-9/30/2023
	A	B	C	D	E	F	G	H
Dinuba	6,223	7,106	7,186	4.05%	7,212	7,188	4.05%	965
Exeter	3,803	4,305	4,426	2.50%	4,365	4,428	2.50%	625
Farmersville	2,878	3,253	3,343	1.89%	3,298	3,344	1.89%	466
Lindsay	3,384	3,858	3,972	2.24%	3,914	3,974	2.24%	590
Porterville	17,764	20,331	20,952	11.82%	20,639	20,960	11.82%	3,196
Tulare	20,022	22,908	23,606	13.32%	23,255	23,616	13.32%	3,594
Visalia	47,380	55,411	57,379	32.37%	56,386	57,401	32.37%	10,021
Woodlake	2,187	2,486	2,558	1.44%	2,521	2,559	1.44%	372
Unincorporated County	46,774	52,477	53,834	30.37%	53,151	53,855	30.37%	7,081
Total	**150,415**	**172,134**	**177,255**	**100.00%**	**174,741**	177,325	100.00%	26,910

Also, as noted in the RHNA, "An underlying principle of the RHNA Methodology is to ensure that affordable housing is equitably distributed throughout the region. The Methodology applies an adjustment factor based on disparities in household income across the TCAG region. The adjustment factor assigns a higher proportion of units affordable to lower income households to jurisdictions that currently have a lower proportion of affordable households compared to the regional average, and assigns a lower proportion of affordable units to jurisdictions that currently have a higher proportion of affordable households than the regional average. The Methodology is intended to help the region achieve income parity (the same proportion of affordable units in

[15] TCAG. Final Regional Housing Needs Plan for Tulare County 2014-202. Page 9. Accessed July 2021 at: https://tularecog.org/tcag/studies/regional-housing-needs-assessment-rhna/
[16] Ibid. 19.

each community) by 2050. Figure 7B [of the RHNA, **Table 3.14-8** in this Draft EIR] summarizes the overall allocation of units to each jurisdiction and the allocation by the four income categories."[17]

Table 3.14-8
RHNA 2014-2023
Allocation by Income Category

Table 1: 2014-2023 Final RHNA Allocations by Income Category
Tulare County Region
January 1, 2014 to September 30, 2023

	Total RHNA Allocation	Very Low-Income Allocation		Low-Income Allocation		Affordable Allocation (Combined Low + Very Low-Income)		Moderate-Income Allocation		Above Moderate-Income Allocation	
		Units	Percent of Total RHNA	Units	Percent of Total RHNA	Units	Percent of Total RHNA	Units	Percent of Total RHNA	Units	Percent of Total RHNA
Dinuba	965	211	21.9%	163	16.9%	374	38.8%	121	12.5%	470	48.7%
Exeter	625	143	22.9%	125	20.0%	268	42.9%	85	13.6%	272	43.5%
Farmersville	466	74	15.9%	65	13.9%	139	29.8%	68	14.6%	259	55.6%
Lindsay	590	80	13.6%	80	13.6%	160	27.1%	82	13.9%	348	59.0%
Porterville	3,196	623	19.5%	576	18.0%	1,199	37.5%	566	17.7%	1,431	44.8%
Tulare	3,594	920	25.6%	609	16.9%	1,529	42.5%	613	17.1%	1,452	40.4%
Visalia	10,021	2,616	26.1%	1,931	19.3%	4,547	45.4%	1,802	18.0%	3,672	36.6%
Woodlake	372	71	19.1%	41	11.0%	112	30.1%	69	18.5%	191	51.3%
Unincorporated County	7,081	1,477	20.9%	1,065	15.0%	2,542	35.9%	1,169	16.5%	3,370	47.6%
Total	**26,910**	**6,215**	**23.1%**	**4,655**	**17.3%**	**10,870**	**40.4%**	**4,575**	**17.0%**	**11,465**	**42.6%**

Note: Percentages may not sum to 100 percent due to rounding

"According to the California Department of Finance estimates, the total population of Tulare County was 462,189 on January 1, 2015. The 2010 U.S. Census reported Tulare County the 8th largest county of growth in California. Numerically speaking, the 2010 Census data reports the County grew from 368,021 (2000 Census) to 442,179, which is 20.2% growth. The population living in unincorporated areas of the County was 144,743, which represented 32% of the total population. Using the U.S. Census Bureau and California Department of Finance figures, the total population of Tulare County has grown 18% since the year 2000. However, much of that growth has occurred within the eight incorporated cities located throughout the County. Since 2000, the populations in the cities grew 26%, while the population of the unincorporated areas grew 2.7%. This growth pattern directed toward cities can be explained by availability of public services and infrastructure that cities can provide and results in the continuing annexation of unincorporated agricultural lands adjacent to city boundaries. In 1980, 51% of the County's total

[17] Ibid. 19.

population lived in cities. Now it stands at 68% as indicated in Table 3-1 [in the Housing Element, **Table 3.14-10** in this Draft EIR].and Chart 3-1 [in the Housing Element]."[18]

Table 3.14-9
Tulare County Population Growth Trend 1980-2014

Geography	1980	1990	2000	2010	2014
Cities	124,302	178,815	227,199	299,307	312,634
Unincorporated Area	121,436	311,921	368,021	442,179	459,446
County Population	245,738	311,921	368,021	442,179	459,446

Source: Tulare County Housing Element 2015 Update. Page 3-2, Table 3-1.

"Affordability problems occur when housing costs become so high in relation to income that households have to pay an excessive proportion of their income for housing, or are unable to afford any housing and are homeless. A household is considered to be overpaying (or cost burdened) if it spends more than 30 percent of its gross income on housing. Severe overpayment occurs when a household spends more than 50 percent of income on housing. Housing costs depend upon many variables, including the type, size, value and/or location of the housing units, the intended tenure of the unit (whether it is to be occupied by owners or renters), and the inclusion or exclusion of one or more utilities, services, property taxes, insurance, and maintenance."[19]

"Housing costs continue to rise significantly. The 2010 Census reports the median rent has increased 10.72% from $727 in 2000 to $805 in 2010. The median monthly owner costs for housing units with a mortgage have seen a minor decrease going from $1,518 to $1,471 which is a -3.09% decrease. The monthly owner costs for those housing units without a mortgage increased by less than 1%, going from $330 to $361."[20]

"The County's median household income has decreased 2.91% from $45,117 in 2008 to $43,803 in 2010. This has not kept up with the rise in housing costs. Therefore, households are challenged with a greater housing cost burden. This is demonstrated in the increased percentage of household income families are paying for housing. In 2010, 51.9% of renter households and 48.39% of owner occupied households pay 35% or more of their income for housing (up from 41.5% and 37.7% in 2008)."[21]

"The TCAG RHNA Plan recommends that the County provide land use and zoning to accommodate 7,081 housing units during the planning cycle. This averages 885 units per year in the unincorporated portions of the County. This high allocation and augmented number is due to the fact that the County's housing allocation was based on the County's existing total housing

[18] Tulare County Housing Element 2015 Update. Page 3-1. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20TULARE%20COUNTY%20HOUSING%20ELEMENT%20UPDATE%202015.pdf.

[19] Ibid. 3-21.

[20] Op. Cit. 3-26.

[21] Op. Cit. 3-26 to 3-27.

stock percentage of 30% (2014). The allocation was not based on the County's actual housing growth rate. The County anticipates an unincorporated growth rate of less than 15% of the Countywide housing stock increase during the life of the Housing element. It is not anticipated that the County's unincorporated housing units will remain at a total of 30% of the countywide housing units, but will decrease to less than 25% due to a housing unit growth rate of 15%. However, to remain consistent with the housing allocation based on TCAG's RTP, the County continues to be allocated an extremely high housing share to 7,081 units (885 units per year over the 8 year RHNA planning period). "[22]

As of January 1, 2021, the California Department of Finance estimates a total of 44,705 existing housing units in the unincorporated area.[23] (See **Table 3.14-10**)

Table 3.14-10
Estimated Housing Units
Unincorporated Tulare County - 2021

Single	
Detached	35,002
Attached	59
Multiple	
Two to Four	1,750
Five Plus	1,253
Mobile Homes	6,641
Unincorporated Total	44,705
Housing Units Occupied	39,246
Vacancy Rate	12.27%

"Severely Disadvantaged Community

Public Resources Code 75005. (g) states that a "[d]isadvantaged community" means a community with a median household income less than 80% of the statewide average. "Severely disadvantaged community" means a community with a median household income less than 60% of the statewide average.

In 2017, Cutler's median household income was $31,939 and Orosi's median household income was $35,798, whereas the State of California's median household income was $67,169. Median household income for Cutler was 47.5% and Orosi median household income was 53.3% of the State of California's median household income, and therefore considered severely disadvantaged communities."[24] See Table 10 of the Update, **Table 3.14-11** of this Draft EIR.

[22] Op. Cit. 3-73.

[23] California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark. Accessed July 2021 at: https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

[24] Draft Cutler-Orosi Community Plan 2021Update. Page 29.

Table 3.14-11 2013-2017 American Community Survey: Income					
Geography	**Median household income (dollars)**	**Mean household income (dollars)**	**Median family income (dollars)**	**Mean family income (dollars)**	**Per capita income (dollars)**
California	$67,169	$96,104	$76,975	$106,970	$33,128
Tulare County	$44,871	$62,325	$47,280	$65,927	$18,927
Cutler CDP	$31,939	$36,990	$30,760	$32,501	$8,436
Orosi CDP	$35,798	$46,444	$41,379	$40,839	$12,163
Source: California Department of Finance					

Poverty

"According to the California Department of Finance, the 2013-2017 American Community Survey (see Table 11 [of the Update], **Table 3.14-12**of this Draft EIR**)** indicated that 39.7% of all families living in Cutler lived below the poverty line and 24.3% of all families in Orosi lived below the poverty line. For all people Cutler (47.5%) and Orosi (25.7%) had a higher level of poverty compared to Tulare County at 27.1% and the State of California at 15.1%. The highest differential was the poverty rate of persons under 18 years. Poverty rate for persons under 18 years for Cutler was 61.6% and Orosi was 46.0% compared to 36.2% for Tulare County and 20.8% for the State of California.".[25]

Table 3.14-12 2013-2017 American Community Survey: Poverty					
Geography	**All families**	**Married couple families**	**Families with female householder, no husband present**	**All people**	**Persons under 18 years**
California	11.1%	6.6%	26.0%	15.1%	20.8%
Tulare County	23.0%	15.4%	42.2%	27.1%	36.2%
Cutler CDP	39.7%	27.7%	52.0%	47.5%	61.6%
Orosi CDP	24.3%	21.3%	29.9%	25.7%	46.0%
Source: California Department of Finance					

[25] Ibid. 44.

Housing Characteristics

Housing Units

"During the ensuing years between 2000 and 2017 (see Table 12 of the Update, **Table 3.14-13** in this Draft EIR), the number of housing units in Cutler increased from 973 to 1,293, and in Orosi increased from 1,741 to 2,076. This represents an increase of 32.9% for Cutler, and 19.2% for Orosi."[26] These increases were higher than the percent increase in Tulare County of 3.5% and the State of California at 2.3%.

Table 3.14-13
Housing Units (2000 & 2017)

Geography	2000 Total housing units	2017 Total housing units	Percent Increase
California	13,680,081	13,996,299	2.3%
Tulare County	141,696	146,712	3.5.%
Cutler CDP	973	1,293	32.9%
Orosi CDP	1,741	2,076	19.2%

Source: California Department of Finance

Housing Types

"According to the California Department of Finance, the 2013-2017 American Community Survey (see Table 13 [of the Update, **Table 3.14-14** in this Draft EIR]) indicated that 69.6% of the housing units in Cutler and 80.0% of the housing units in Orosi were 1 unit detached. In Tulare County 45.4% of the housing units were 1-unit detached, and in California 0.6% of housing units were 1-unit detached."[27] Additional housing unit data is shown in **Table 3.14-15**.

[26] Op. Cit.
[27] Op Cit.

Table 3.14-14 2013-2017 American Community Survey: Unit Types				
	California	**Tulare County**	**Cutler CDP**	**Orosi CDP**
Total housing units	13,996,299	146,712	1,293	2,076
1-unit detached	8,131,716	110,555	900	1,661
%	0.6%	45.4%	69.6%	80.0%
1-unit attached	978,110	3,866	26	28
%	1.5%	2.6%	2.0%	1.3%
2 units	343,548	4,084	153	106
%	11.5%	2.8%	11.8%	5.1%
3 or 4 units	775,541	8,342	146	68
%	10.9%	5.7%	11.3%	3.3%
5 to 9 units	857,711	4,084	47	58
%	6.1%	2.8%	3.6%	2.8%
10 to 19 units	728,840	1,667	21	55
%	5.2%	1.1%	1.6%	2.6%
20 or more units	1,647,167	4,027	0	15
%	11.8%	2.7%	0.0%	0.7%
Mobile home	518,818	9,931	0	85
%	3.7%	6.8%	0.0%	4.1%

Tenure

"Tenure" is essentially a description of how a household is being occupied, that is, whether the owners or renters are living in a housing unit. "During the ensuing years between 2010 and 2017 (see Table 14 [of the Update, **Table 3.14-15** in this Draft EIR]), the home ownership percentage in California decreased by approximately 2.67%. In Tulare County, that percentage decreased by approximately 4.74%. In Cutler, the homeownership percentage decreased by approximately 8.0% and increased by 15.6% in Orosi. While the average household size for both owner- and renter-occupied units decreased in the State of California, Cutler, and Orosi; Tulare County's average household size increased for owner-occupied units but decreased for renter-occupied units."[28]

[28] Op Cit. 45.

Table 3.14-15 Ownership and Household Size (2010 & 2017)						
	2010			2017		
Geography	**Percent Ownership**	**Average household size of owner-occupied units**	**Average household size of renter-occupied units**	**Percent Ownership**	**Average household size of owner-occupied units**	**Average household size of renter-occupied units**
California	56%	2.95	2.83	54.5%	3.00	2.91
Tulare County	59%	3.24	3.52	56.2%	3.27	3.46
Cutler CDP	43.7%	4.51	4.69	40.2%	3.68	5.34
Orosi CDP	56.3%	4.41	4.43	65.1%	3.91	3.82
Source: California Department of Finance						

Housing Conditions

"According to the 2015 Cutler Community Housing Condition Survey, approximately 15% of the housing stock in Cutler was sound (see Table 15 [of the Update, **Table 3.14-16** in this Draft EIR]) and 75% of the housing stock were deteriorated and in need of replacing. Conversely, 87% of Orosi's housing stock (see Table 16 [of the Update, **Table 3.14-17** in this Draft EIR]) is sound, and only 15% is deteriorated or dilapidated."[29]

Table 3.13-16 Housing Conditions Survey (Cutler)											
Survey Area	**Sound**		**Deteriorated**						**Dilapidated**		**Total Units**
			Minor		**Moderate**		**Substantial**				
	Units	**%**	**Units**	**%**	**Units**	**%**	**Units**	**%**	**Units**	**%**	
Cutler	43	15	35	12	162	57	18	6	24	9	282
Source: Tulare County 2015 Housing Condition Survey, Tulare County 2015 Housing Element											

Table 3.13-17 Housing Conditions Survey (Orosi)											
Survey Area	**Sound**		**Deteriorated**						**Dilapidated**		**Total Units**
			Minor		**Moderate**		**Substantial**				
	Units	**%**	**Units**	**%**	**Units**	**%**	**Units**	**%**	**Units**	**%**	
Orosi	482	87	17	3	14	3	9	2	31	6	553
Source: Tulare County 2015 Housing Condition Survey, Tulare County 2015 Housing Element											

[29] Op. Cit. 46.

"The percentage of substandard housing in Cutler-Orosi increased between 1992 and 2015. The percentage was 30% in 1992, 14% in 2003, 17% in 2009, and 76% in 2015 (see Table 17 of the Update, **Table 3.14-18** in this Draft EIR])"[30]

Table 3.14-18
Percentages of Substandard Housing Units in Tulare County Unincorporated Community 1992-2015

	1992 Survey Results	2003 Survey Results	2009 Survey Results	2015 Survey Results
Cutler-Orosi	30%	14%	17%	76%

Source: 1992, 2003, 2009, 2015 Tulare County Housing Survey of Unincorporated Communities, 2015 Housing Element

Age of Structures

"According to the U.S. Census, the 2013-2017 Community Survey (see Tables 18 and 19 [of the Update, **Tables 3.14-19** and **3.14-20** of this Draft EIR]) noted that 24.9% of the housing structures in Cutler were built between 1980 and 1989 and 26.4% of the housing structures in Orosi were built between 1960 and 1969.[31]

Table 3.14-19
2013-2017 American Community Survey: Age of Structures in Cutler

Age of Structures	Number	Percentage
Built 2014 or later	0	0.0%
Built 2010 to 2013	25	1.9%
Built 2000 to 2009	214	16.6%
Built 1990 to 1999	121	9.4%
Built 1980 to 1989	322	24.9%
Built 1970 to 1979	244	18.9%
Built 1960 to 1969	141	10.9%
Built 1950 to 1959	74	5.7%
Built 1940 to 1949	83	6.4%
Built 1939 or earlier	69	5.3%
Total	1,293	-

Source: U.S. Census

[30] Op Cit.
[31] Op Cit. 47.

Table 3.14-20 2013-2017 American Community Survey: Age of Structures in Cutler		
Age of Structures	**Number**	**Percentage**
Built 2014 or later	0	0.0%
Built 2010 to 2013	0	0.0%
Built 2000 to 2009	277	13.3%
Built 1990 to 1999	402	19.4%
Built 1980 to 1989	95	4.6%
Built 1970 to 1979	342	16.5%
Built 1960 to 1969	548	26.4%
Built 1950 to 1959	172	8.3%
Built 1940 to 1949	59	2.8%
Built 1939 or earlier	181	8.7%
Total	2,076	-
Source: U.S. Census		

Household Size (Overcrowding)

"In 2017 the average owner occupied household size in Cutler was 3.68 and Orosi was 3.91 persons per household (see Table 20 [of the Update, **Table 3.14-21** of this Draft EIR]) and the average renter household size in Cutler was 5.34 and in Orosi was 3.82. By definition, the most common measure of overcrowding is persons per room in a dwelling unit. More than one person for each room of a dwelling unit is considered overcrowding. It is important to note that the measure is based on all rooms of a dwelling unit, not just the number of bedrooms. It is not uncommon for persons to share a bedroom, for example siblings or adults."[32]

Table 3.13-21 Average Household Size		
Geography	**Average Household size (Owner Occupied)**	**Average Household size (Renter Occupied)**
California	3.00	2.91
Tulare County	3.27	3.46
Cutler	3.68	5.34
Orosi	3.91	3.82
2013-2017 American Community Survey 5-Year Estimates		

Vacancy Rate

"In 2000, the vacancy rate (see Table 21 [of the Update, **Table 3.14-22** of this Draft EIR]) in Cutler was 6.6% and Orosi was 3.6%, which was lower than Tulare County at 7.7% and higher than the State of California at 5.8%. In 2010, the vacancy rate in Cutler was 4.5% and Orosi was 4.1%, which is lower than Tulare County at 8.0% and the State of California at 8.1%. While the

[32] Op Cit. 47.

State of California's rental vacancy rate decreased from 10.7% to 6.3%, the rental vacancy rate in Cutler increased from 2.4% to 4.0% and Orosi decreased from 5.5% to 3.7% between 2000 and 2010. While Tulare County's rental vacancy rate remained at 5.8% during this decade."[33]

Table 3.13-22
Vacancy Rate (2000 &2010)

Geography	2000			2010		
	Vacancy rate	Homeowner vacancy rate	Rental vacancy rate	Vacancy rate	Homeowner vacancy rate	Rental vacancy rate
California	5.8%	1.4%	10.7%	8.1%	2.1%	6.3%
Tulare County	7.7%	1.8%	5.8%	8.0%	2.4%	5.8%
Cutler CDP	6.6%	0.6%	2.4%	4.5%	1.0%	4.0%
Orosi CDP	3.6%	0.3%	5.5%	4.1%	2.6%	3.7%

Source: California Department of Finance

Renter Affordability

"According to the US Census Bureau, the 2013-2017 American Community Survey (see Table 34 [in the Update, **Table 3.14-23** in this draft EIR]) data indicated that in 2017 the cost of rent in Cutler-Orosi was lower than in Tulare County and the State of California, but that rent constituted a larger percentage of household income. The median rent was $755 in Cutler and $873 in Orosi, whereas the median rent was $877 in Tulare County and $1,358 in the State of California, respectively. In Cutler, the percentage of households paying 35% or more of income on housing was 63.9% and in Orosi, it was 68.2%, while the percentage of households paying 35% or more of income on housing was 47.2% in Tulare County and 47.0% in the State of California."[34]

Table 3.14-23
2013-2017 American Survey: Renter Cost

Geography	Median Rent	Gross Rent as a % of Household Income					
		Less than 15.0 %	15.0% to 19.9%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	$1,358	9.6%	10.9%	12.1%	11.5%	9.6%	46.4%
Tulare County	$877	10.6%	10.5%	12.1%	10.7%	8.7%	47.2%
Cutler CDP	$755	12.0%	13.1%	5.7%	1.1%	4.0%	63.9%
Orosi CDP	$873	11.5%	14.1%	6.2%	0.0%	0.0%	68.2%

Source: 2013-2017 American Community Survey 5-Year Estimates

[33] Op Cit. 48.
[34] Op Cit. 172.

Owner Affordability

"According to the US Census Bureau, the 2013-2017 American Community Survey data indicated that in 2017 the cost of a mortgage in Cutler-Orosi was lower in Tulare County and the State of California. The mortgage constituted a smaller percentage of household income compared to Tulare County and the State of California. The median owner cost (with mortgage) was $927.00 in Cutler and $1,132.00 in Orosi, whereas the median owner cost was $1,345 in Tulare County and $2,206 in the State of California, respectively. In Cutler, the percentage of households paying 35% or more of income on housing was 29.9% and in Orosi 53.0%. The percentage of households paying 35% or more of income on housing was 31.7% in Tulare County and 30.7% in the State of California (see Table 35 [in the Update, **Table 3.14-24** in this draft EIR])."[35]

Table 3.14-24
2013-2017 American Community Survey: Owner Cost

Geography	Median Owner Cost (with mortgage)	Mortgage as a % of Household Income				
		Less than 20.0%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	$2,206	32.5%	19.6%	12.5%	9.0%	30.7%
Tulare County	$1,345	36.2%	14.5%	10.4%	7.1%	31.7%
Cutler CDP	$927	62.9%	0.0%	7.0%	14.8%	29.9%
Orosi CDP	$1,132	52.4%	14.5%	0.0%	0.0%	53.0%

Source: 2013-2017 American Community Survey 5-Year Estimates

REGULATORY SETTING

Federal Agencies & Regulations

U.S. Department of Housing and Urban Development (HUD)

"HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes: utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business."[36]

[35] Ibid.

[36] U.S. HUD. Mission. Accessed July 2021 at: http://portal.hud.gov/hudportal/HUD?src=/about/mission.

State Agencies & Regulations

California Department of Housing and Community Development (HCD)

HCD's mission is to "[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians."[37] "In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element."[38]

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and Projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local Policy & Regulations

Tulare County 2008 Regional Housing Needs Assessment Plan

"Housing element law requires all local governments to adequately plan to meet their existing and projected housing needs including their share of the regional housing need. In Tulare County, the regional housing need is determined by the Tulare County Association of Governments (TCAG) through the Regional Housing Needs Assessment (RHNA) process. The RHNA planning period for this element is January 1, 2014 – September 30, 2023. The RHNA process specifies the number of housing units that must be accommodated in five income categories: extremely low, very low, low, moderate and above moderate. RHNA is not a production quota; however, demonstration of adequate capacity for new dwelling units on vacant or underutilized sites is the basis for compliance with the RHNA component of housing element law"[39]

[37] California HCD. Our Mission and What We do. Accessed July 2021 at: https://www.hcd.ca.gov/about/mission.shtml

[38] Tulare County Housing Element 2015 Update. Page 1-3. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015.pdf

[39] Ibid. 7-1.

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;
- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and
- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

"The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. …HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible." HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants."[40]

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed as follows:

Housing Guiding Principle 1.1 - Endeavor to improve opportunities for affordable housing in a wide range of housing types in the communities throughout the unincorporated area of the County.

Housing Policy 1.11 - Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

[40] Op. Cit. 5-12.

Housing Policy 1.13 - Encourage the utilization of modular units, prefabricated units, and manufactured homes.

Housing Policy 1.14 - Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Housing Policy 1.15 - Encourage housing counseling programs for low income homebuyers and homeowners.

Housing Policy 1.16 - Review community plans and zoning to ensure they provide for adequate affordable residential development.

Housing Guiding Principle 1.2 - Promote equal housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, family status, disability, or any other arbitrary basis.

Housing Guiding Principle 1.3 - Strive to meet the housing needs of migrant and non-migrant farmworkers and their families with a suitable, affordable and satisfactory living environment.

Housing Policy 1.31 - Encourage the provision of farmworker housing opportunities in conformance with the Employee Housing Act.

Housing Policy 1.33 - Encourage and support a balance between housing and agricultural needs.

Housing Policy 1.51 - Encourage the construction of new housing units for "special needs" groups, including senior citizens, large families, single heads of households, households of persons with physical and/or mental disabilities, minorities, farmworkers, and the homeless in close proximity to transit, services, and jobs.

Housing Policy 1.52 - Support and encourage the development and improvement of senior citizen group housing, convalescent homes and other continuous care facilities.

Housing Policy 1.55 - Encourage development of rental housing for large families, as well as providing for other housing needs and types.

Housing Guiding Principle 1.6 - Assess and amend County ordinances, standards, practices and procedures considered necessary to carry out the County's essential housing goal of the attainment of a suitable, affordable and satisfactory living environment for every present and future resident in unincorporated areas.

Housing Policy 2.14 - Create and maintain a matrix of Infrastructure Development Priorities for Disadvantaged Unincorporated Communities in Tulare County thorough analysis and investigation of public infrastructure needs and deficits, pursuant to Action Program 9.

Housing Guiding Principle 2.2 - Require proposed new housing developments located within the development boundaries of unincorporated communities to have the necessary infrastructure and capacity to support the development.

Housing Policy 2.21 - Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

Housing Guiding Principle 3.1 - Encourage "smart growth" designed development that serves the unincorporated communities, the environment, and the economy of Tulare County.

Housing Policy 3.11 - Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

Housing Policy 3.12 - Support locally initiated programs to provide neighborhood parks and recreational facilities for residential areas within unincorporated communities.

Housing Policy 3.13 - Encourage subdivision and housing unit design, which provides for a reasonable level of safety and security.

Housing Policy 3.16 - Actively seek federal, state, and private foundation grant funds for park and recreation facilities in unincorporated areas, including dual-use storm drainage ponding basins/recreation parks.

Housing Policy 3.23 - Prepare new and/or updated community plans that provide adequate sites for a variety of types of housing within the development boundaries of community.

Guiding Principle 4.1 - Support and encourage County ordinances, standards, practices and procedures that promote residential energy conservation.

Housing Policy 4.11 - Review residential projects for environmental impacts and impose conditions to reduce those impacts.

Housing Policy 4.12 - Facilitate land use policies and programs that meet housing and conservation objectives.

Housing Policy 4.13 - Promote energy efficiency and water conservation.

Housing Policy 4.14 - Enforce the requirements of County Ordinances regarding the disposal of construction and demolition debris.

Housing Policy 4.15 - Enforce energy Efficiency Standards for Residential and Non-Residential properties (Title 24).

Housing Policy 4.21 - Promote energy conservation opportunities in new residential development.

Housing Policy 4.22 - Enforce provisions of the Subdivision Map Act regulating energy-efficient subdivision design.

Housing Policy 5.21 - Administer and enforce the relevant portions of the Health and Safety Code.

Housing Policy 5.26 - Prohibit concentrations of dwelling units near potentially incompatible agricultural uses as defined in the Animal Confinement Facilities Plan.

IMPACT EVALUATION

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Project Impact Analysis: ***Less Than Significant Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. To be consistent with the Tulare County General Plan, a 1.3% growth rate has been applied to the Cutler-Orosi Planning Area through the Year 2030 Planning horizon.

Implementing the Community Plan Update will, over time, have a direct, growth inducing impact on the communities of Cutler-Orosi. “Land use patterns in Cutler and Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

The purpose of the Update is to establish land use policies to guide existing and future development to the year 2010. The general intent of these policies is to protect the health, safety, and welfare of persons living in Cutler and Orosi. In more specific terms, the policies serve to identify the most appropriate locations and arrangement of different types of land uses based upon environmental, circulation, infrastructure/services, and planning concerns.

The County of Tulare, through existing policies, has encouraged both incorporated and unincorporated communities to establish urban development and land use patterns, which are compact and contiguous. This policy position has reduced so-called "leap frog" development throughout the County, helping preserve agricultural lands, and minimize land use conflicts between urban and agricultural areas."[41]

As such, a ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

The residential growth from these areas is envisioned by the Tulare County General Plan; therefore, they would not result in unanticipated population growth within the Project area. The Project itself also would not induce substantial population growth beyond anticipated levels. Therefore, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, even combined with other cumulative projects, the Project would not accelerate unplanned population growth in the Cutler-Orosi area. Therefore, population growth within the unincorporated community of Cutler-Orosi would be consistent with the Tulare County General Plan. As such, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban

[41] Draft Cutler-Orosi Community Plan 2021 Update. Page 33.

Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As such, no specific residential projects are proposed nor will any residences be removed as a result of implementation of the proposed Update, or due to the construction of the new residences. The proposed Update is intended to expand the housing supply rather than reduce existing housing stock. Therefore, it is not anticipated that conversion of existing housing stock to non-residential uses would take place. As such, the impact through the Year 2030 Planning horizon of the Cutler-Orosi Planning Area will result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, no residences are expected to be removed on the Project site and the proposed Project will not displace any housing units. ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted previously, there will be no impact related to the displacement of housing or people. Population growth as a result of the proposed Update will not exceed, and is consistent with, the projected growth rate contained in the Tulare County General Plan. Also, any growth will be accommodated by the policies outlined in the Update. As such, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: ***Less Than Significant Impact***

As discussed earlier, the Project will not displace or require the demolition of any residences, thereby necessitating the construction of replacement housing elsewhere. Accordingly, the Project will result in a ***Less Than Significant Impact*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

The proposed Project will not convert housing on-site or off-site. ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

There will be a ***Less Than Significant Impact*** related to the displacement of housing or people. Population growth as a result of the proposed Update will not exceed, and is consistent with, the projected growth rate contained in the Tulare County General Plan. Also, any growth will be accommodated by the policies outlined in the Update. The, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

ACRONYMS

CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
DOF	California Department of Finance
EIR	Environmental Impact Report
HATC	Housing Authority of the County of Tulare
RHNA	Regional Housing Needs Assessment
UDB	Urban Development Boundary

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Section 15126.2(a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

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Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Included in Appendix "F" of this Draft EIR.

Tulare County. Draft Tulare County General Plan 2030 Update. August 2012. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

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Public Services
Chapter 3.15

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update will result in a ***Less Than Significant Impact*** related to Public Services during the Year 2030 Planning horizon. As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. No mitigation measures are necessary or will be required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

The environmental setting provides a description of the Public Services in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Impact Fire Services
- Impact Police Services
- Impact Schools
- Impact Parks
- Impact Other Public Facilities

ENVIRONMENTAL SETTING

Fire Protection

"The [former] California Department of Forestry and Fire Protection/Tulare County Fire Department [now CalFire/TCFD] serve 145,128 of Tulare County's population. As **Table 7-6** [of the General Plan Background document] shows, dispatchers reported 14,022 responses in 2002, averaging 38.4 calls a day. Fire occurrence data generated by the department indicate a direct relationship between high use areas of the county and fire occurrence. The population increase in the mountain areas have caused increased wildland urban interface problems as well. Structures are being built throughout wildland areas wherein vegetation fires can spread rapidly. Providing adequate fire protection to those structures has become a major undertaking."[1]

The Tulare County Fire Department's 2013 Annual Report provides a summary of Incident Reports by major incident type as shown in **Table 3.15-1**.[2]

Table 3.15-1 Summary of Incidents

MAJOR INCIDENT TYPE	# INCIDENTS	% OF TOTAL
Fires	1484	12.28
Overpressure, Rupture,…	38	0.31
Rescue & Emergency	7234	59.88
Hazardous Conditions	325	2.69
Service Calls	666	5.51
Good Intent	1892	15.66
False Alarm	358	2.96
Severe Weather	3	0.02
Special Type	84	0.70
TOTAL	**12,084**	**100%**

As shown in **Table 3.15-1**, the Tulare County Fire Department responded to 12,084 calls for service in 2012; a majority of the calls were for rescue and medical emergencies (59.8 percent) followed by fire calls (12.28 percent) and "good intent" (15.6 percent) as the top three incident types. "The Tulare County Fire Department provides fire protection and emergency medical services for Cutler-Orosi. The Tulare County Fire Station #4 is located at 40779 Road 128, Cutler-Orosi Fire Station. Cutler-Orosi Fire Station has Patrol 4, Engine 4, and Engine 204 assigned to this location. Paid On-Call Fire Fighters are assigned to this station and they respond when called out to an incident."[3]

CalFire/TCFD uses an "attack" time protocol of less than ten minutes to respond to 90 percent of

[1] Tulare County General Plan 2030 Update. Background Report. Page 7-73 Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.
[2] Tulare County Fire Department's 2013 Annual Report. Page 9. Accessed on January 9, 2014 at: http://tularecounty.ca.gov/fire/index.cfm/department-information-for-the-field/annual-report-2013/.
[3] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Page 81. Included in Appendix "F" of this Draft EIR.

the calls on the valley floor and less than 15 minutes on 75 percent of calls in the foothill and mountain areas. The proposed Project site is within both the 10- and 15-minute response areas.

Police Protection

"In 2007, the Tulare County Sheriff's Department currently had 448 sworn officers serving its unincorporated population (145,128), and generates a level of service ratio of 3.2 officers per 1,000 residents. The ratio is above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff's Department also has 186 non-sworn clerical and support staff amounting to a total Sheriffs Department staff personnel of 633 employees."[4]

"Law enforcement protection for the unincorporated county is divided into 22 areas with four stations… [T]he Porterville substation serves the largest number of areas with 10 patrols, followed by the headquarters in Visalia with six, and Cutler-Orosi and Pixley, each with three areas."[5]

"Police protection services are provided in Cutler-Orosi by the Tulare County Sheriff's Department sub-station, located at 12800 Avenue 416, in Orosi. The Substation covers approximately 289 square miles serving a rural population to include the unincorporated communities of Cutler, East Orosi, Orosi, Seville, Sultana, Traver and Yettem. The Substation runs a four-shift operation, which includes 23 deputies, four (4) sergeants and one (1) lieutenant. There are a minimum of three deputies and one sergeant in the field at all times. In addition, general shift staffing the communities of Cutler-Orosi are assigned a Community Based Officer assigned specifically to those areas. The substation is open for walk-ins from 8:00 am to 5:00 pm Monday thru Friday. After hours and weekends there is a phone provided outside the substation that calls directly into the dispatch center. The substation provides patrol services 24-hours per day, 365 days per year. Additional Sheriff Resources are available as needed via dispatch from the main Sheriff's Office in Visalia, CA."[6]

Schools & Parks

"The Cutler-Orosi Community Plan Area is within the Cutler-Orosi Joint Unified School District located within its boundaries. It offers pre-school through 12th grade education and has a 2016-2017 enrollment of 4,126 students."[7] During School Year 2019-2020, 4,123 students were enrolled throughout the entire School District,[8] while 4,151 student were enrolled during School Year 2020-2021.[9]

[4] Tulare County General Plan 2030 Update. Background Report. Pages 7-71 and 7-72.

[5] Ibid.

[6] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Page 80. Included in Appendix "F" of this Draft EIR.

[7] Ibid. 86.

[8] California Department of Education. 2019-2020 Enrollment by Ethnicity and Grade. Cutler-Orosi Joint Unified Report (54-71860). Accessed July 2021 at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=5471860&agglevel=district&year=2019-20

[9] Tulare County Office of Education. Cutler-Orosi Join Unified School District. Average Daily Attendance. Accessed July 2021 at: http://www.tcoe.org/Districts/CutlerOrosi.shtm.

There are a number of Federal, State, and local parks within Tulare County, including 13 park and recreational facilities operated by the County of Tulare. A list of these local park facilities is provided in **Table 3.15-2**.

Table 3.15-2
Recreational Areas in Tulare County

ID	Recreation Area	Location	Acres	Type of Use/Features
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp COTYAC	Near Ponderosa in Eastern Tulare County.	8	County of Tulare Youth Adventure Camp (Camp COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
7	Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County Museum	In Mooney Grove Park, South Visalia.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.

Source: General Plan Background Report

"Cutler-Orosi's nearest park is Ledbetter Park located at 40779 Road 124 in Cutler, California.

The Cutler-Orosi Joint Unified School District has been in the process of developing the Orosi High School Recreation Complex (approximately 32-acres) located at 41815 Road 128 in Orosi, California. Phase I currently contains football, soccer, baseball, and softball fields that were constructed in the spring/summer of 2019.

The Orosi High School Recreation Complex Phase II proposes the installation of 19 light standards within the previously developed recreational complex area in Orosi, California. Eight 70-foot light standards would be installed around the existing football field and junior varsity soccer field, six 60- to 80-foot light standards would be installed around the existing baseball field, and five 60- to 70-foot light standards would be installed around the existing softball field.[10]

Additional discussion of recreational facilities is provided in Chapter 3.16.

Library

"The Tulare County Public Library System is comprised of interdependent branches, grouped by services, geography and usage patterns to provide efficient and economical services to the residents of the county. At present, there are 14 regional libraries and one main branch."[11] The nearest library is located at 12646 Avenue 416, in Orosi, while the next nearest branch library is located at 150 I Street in Dinuba, approximately 5.28 miles west of Cutler-Orosi. [It is noted, during the 2020-2021 COVID-19 pandemic, all Tulare County branch libraries have operated at limited schedules or have been closed]

Electricity

The Cutler-Orosi Community Plan area is currently served with electricity provided by Pacific Gas & Electric (PG&E).

Natural Gas

Cutler-Orosi Community Plan area is supplied with natural gas by Pacific Gas & Electric (PG&E).

Telephone

Telephone service in and around the Cutler-Orosi Community Plan area is provided by AT&T.

REGULATORY SETTING

Federal Agencies & Regulations

[10] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Page 87. Included in Appendix "F" of this Draft EIR.
[11] Tulare County General Plan 2030 Update. Background Report. Page 7-96.

None that apply to the proposed Project.

State Agencies & Regulations

None that apply to the proposed Project.

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

PFS-7.1 Fire Protection - The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.2 Fire Protection Standards - The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.3 Visible Signage for Roads and Buildings - The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

PFS-7.5 Fire Staffing and Response Time Standards - The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards.

Table 3.15-3
Fire Staffing and Reponses Time Standards

	Demographics	Staffing/Response Time	% of Calls
Urban	> 1,000 people/sq. mi.	15 FF/9 min.	90
Suburban	500-100 people/sq. mi.	10 FF/10 min.	80
Rural	< 500 people/sq. mi.	6 FF/14 min.	80
Remote*	Travel Dist. > 8 min.	4 FF/no specific response time	90

**Upon assembling the necessary resources at the emergency scene, the fire department should have the capacity to safety commence an initial attach within 2 minutes, 90% of the time. (FF = Fire Fighters)*
Source: Tulare County General Plan 2030 Update

PFS-7.6 Provision of Station Facilities and Equipment - The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.8 Law Enforcement Staffing Ratios - The County shall strive to achieve and maintain a staffing ratio of 3 sworn officers per 1,000 residents in unincorporated areas.

PFS-7.9 Sheriff Response Time - The County shall work with the Sheriff's Department to achieve and maintain a response time of:

- Less than 10 minutes for 90 percent of the calls in the valley region; and
- 15 minutes for 75 percent of the calls in the foothill and mountain regions.

PFS-7.12 Design Features for Crime Prevention and Reduction - The County shall promote the use of building and site design features as means for crime prevention and reduction.

PFS-8.1 Work with Local School Districts - The County shall work with local school districts to develop solutions for overcrowded schools and financial constraints of constructing new facilities.

PFS-8.4 Library Facilities and Services - The County shall encourage expansion of library facilities and services as necessary to meet the needs (e.g., internet access, meeting rooms, etc.) of future population growth.

IMPACT EVALUATION

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

Fire protection?

Project Impact Analysis: ***Less Than Significant Impact***

"The Tulare County Fire Department provides fire protection and emergency medical services for Cutler-Orosi. Tulare County Fire Station #4 is located at 40779 Road 128, Cutler-Orosi Fire Station. Cutler-Orosi Fire Station has Patrol 4, Engine 4, and Engine 204 assigned to this location. Paid On-Call Fire Fighters are assigned to this Station and they respond when called out to an incident."[12]

There are no specific federal or State regulations pertaining to fire or ambulance protection that would reduce environmental impacts associated with the proposed Project. The General

[12] Cutler-Orosi Community Plan 2030 Update. Page 81. Included in Appendix "F" of this Draft EIR.

Plan policies cited above are sufficient to ensure that new developments are not implemented or constructed until adequate fire protection services are available.

The Tulare County Fire Department's 2013 Annual Report provides a summary of Incident Reports by major incident type as shown in **Table 3.15-4**. As shown in **Table 3.15-4**, the Tulare County Fire Department responded to 12,084 calls for service in 2012; a majority of the calls were for rescue and medical emergencies (approximately 60 percent) followed by fire calls (12.28 percent) and "good intent" (15.66 percent) as the top three incident types.

Table 3.15-4
Tulare County Fire Department Incident Reports

MAJOR INCIDENT TYPE	# INCIDENTS	% OF TOTAL
Fires	1,484	12.28
Overpressure, Rupture, …	38	0.31
Rescue & Emergency Medical	7,234	59.88
Hazardous Conditions	325	2.69
Service Calls	666	5.51
Good Intent	1,892	15.66
False Alarm	358	2.96
Severe Weather	3	0.02
Special Type	84	0.70
Total	12,084	100%

Source: Tulare County Fire Department Annual Report 2013.

Also, construction and operation of facilities will comply with the California fire code, local building codes (including requirements for fire suppression systems), and gas pipeline regulations. The Tulare County Fire Department will be responsible for enforcing provisions of the fire code. The California Public Utilities Code regulates the safety of gas transmission pipelines. Standard safety measures for anaerobic treatment facilities that will minimize the potential of biogas include safety flares to reduce excess gas capacity by burning in a controlled environment (that is, a pipe serving as a flue to confine the flame). If released to the environment, methane will disperse rapidly in the air, minimizing the hazards of exposure. Any calls for service will result in temporary impacts to fire service capabilities and impacts will not result in a noticeable increase in fire risk and service demand for the area. A ***Less Than Significant Project-specific Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Therefore, the proposed Project will not significantly impact the fire department's response times. Therefore, ***Less Than Significant and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Even at the conclusion of the planning horizon of the Update, existing policies of the Tulare County General Plan would ensure that additional services and personnel are provided and that new development would not proceed until sufficient fire protection services are ensured. Therefore, ***Less Than Significant Project-specific and Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Police protection?

Project Impact Analysis: ***Less Than Significant Impact***

Based on the Tulare County General Plan 2030 General Plan Update Background Report, "[t]he Tulare County Sheriff's Department currently had 448 sworn officers serving its unincorporated population (145,128), and generates a level of service ratio of 3.2 officers per 1,000 residents. The ratio is above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff's Department also has 186 non-sworn clerical and support staff amounting to a total Sheriff's Department staff personnel of 633 employees."[13]

"Law enforcement protection for the unincorporated county is divided into 22 areas with four stations… [T]he Porterville substation serves the largest number of areas with 10 patrols, followed by the headquarters in Visalia with six, and Cutler-Orosi and Pixley, each with three areas."[14]

"Police protection services are provided in Cutler-Orosi by the Tulare County Sheriff's Department sub-station, located at 12800 Avenue 416, in Orosi. The Substation covers approximately 289 square miles serving a rural population to include the unincorporated communities of Cutler, East Orosi, Orosi, Seville, Sultana, Traver and Yettem. The Substation runs a four-shift operation, which includes 23 deputies, four (4) sergeants and one (1) lieutenant. There are a minimum of three deputies and one sergeant in the field at all times. In addition,

[13] Tulare County, 2010. General Plan Background Report. Pages 7-71 and 7-72. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf
[14] Ibid.

general shift staffing the communities of Cutler-Orosi are assigned a Community Based Officer assigned specifically to those areas."[15]

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Also as indicated earlier in the fire protection services section, new development during the planning period will cumulatively increase the demand for Tulare County to hire additional Sheriff Personnel and purchase more equipment. Implementation of the General Plan policies and local regulations would ensure that adequate sheriff protection is provided to serve residents in the unincorporated areas of Tulare County, including Cutler-Orosi. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, the proposed Project will not impact Police Services. As such, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the proposed Project will not have a significant impact on policing services. ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Schools?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land

[15] Draft Cutler-Orosi Community Plan 2021 Update. Page 80.

use needs. However, as development proposals occur over the years that may result in an increase of the student-aged population, the local School District will be consulted to determine an applicant's obligation to the School District (e.g., school-related fees). As such, ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As such, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. However, as development proposals occur over the years that may result in an increase of the student-aged population, the local School District will be consulted to determine an applicant's obligation to the School District (e.g., school-related fees). The proposed Update includes policies to plan for and build additional schools in conjunction with new development, including existing mechanisms that would also ensure that school facilities are adequate in the incorporated areas. Also, SB 50 limits any further mitigation that may be imposed due to school impacts. Therefore, impact after payment of fees will result in ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Parks?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. However, as development proposals occur over the years, it is

possible that such growth will result in an increase of the local population and parkland needs. Ledbetter Park currently serves as the only County owned/operated park within the Planning Area. It is approximately 11 acres in size and is located in Cutler at the intersection of SR 63/Road 124 and Avenue 408. As the Planning Area's growth is consistent with the General Plan's 1.3% projected annual growth rate from 2007 to 2030, it is possible that future park facilities may be necessary. General Plan parkland-related policies will be implemented as applicable to accommodate possible growth in population. Therefore, a ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Therefore, the proposed Project will not impact Public Services, including parks. As such, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Other public facilities

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. However, as development proposals occur over the years, it is possible that such growth will result in an increase of the local population that could contribute to the need for expanded electrical new development will increase the need for

other public services, such as gas, electricity and phone. Also, all future residential and non-residential development within the Project area would be subject to the latest adopted edition of the Title 24 energy efficiency standards (which are among the most stringent in the U.S.). As such, implementation of the Community Plan would not result in the unnecessary, wasteful, or inefficient use of energy. It is reasonable to assume that the systems can be installed or otherwise upgraded as needed for future growth. Therefore, ***Less Than Significant Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, the proposed Project would result in a ***Less Than Significant Cumulative Impact*** through the Year 2030 Planning horizon related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the proposed Project would not significantly impact other public services; therefore, a ***Less Than Significant Project-specific or Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

ABBREVIATIONS and ACRONYMS

CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
UDB	Urban Development Boundary

REFERENCES

California Department of Education. 2019-2020 Enrollment by Ethnicity and Grade. Cutler-Orosi Joint Unified Report (54-71860). Accessed July 2021 at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=5471860&agglevel=district&year=2019-20

California Environmental Quality Act (CEQA) Guidelines, Section 15126.2 (a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

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Tulare County Fire Department's 2013 Annual Report. Accessed on January 9, 2014 at: http://tularecounty.ca.gov/fire/index.cfm/department-information-for-the-field/annual-report-2013/.

Tulare County. Tulare County General Plan 2030 Update. August 2012. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

Tulare County General Plan 2030 Update. Background Report. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.

Tulare County Office of Education. Cutler-Orosi Join Unified School District. Average Daily Attendance. Accessed July 2021 at: http://www.tcoe.org/Districts/CutlerOrosi.shtm.

Recreation
Chapter 3.16

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project) will result in a ***Less Than Significant Impact*** related to Recreation during the Year 2030 planning horizon. As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. No mitigation measures are necessary or will be required. No mitigation measures will be required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Recreation. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate

any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Recreational Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Increase use of existing recreational facilities
- Include or require additional recreational facilities

ENVIRONMENTAL SETTING

"Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them."[2] In addition to the 13 parks and recreation facilities that are owned and operated by Tulare County, there are State Parks and Forests, National Parks and National Forests, trails, and recreational areas.

Recreational Facilities

Schools and Parks

"The Cutler-Orosi Community Plan Area is within the Cutler-Orosi Joint Unified School District located within its boundaries. It offers pre-school through 12th grade education and has a 2016-2017 enrollment of 4,126 students."[3] During School Year 2019-2020, 4,123 students were enrolled throughout the entire School District,[4] while 4,151 student were enrolled during School Year 2020-2021.[5]

[1] CEQA Guidelines, Section 15126.2 (a)

[2] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 4-1

[3] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Page 86. Included in Appendix "F" of this Draft EIR.

[4] California Department of Education. 2019-2020 Enrollment by Ethnicity and Grade. Cutler-Orosi Joint Unified Report (54-71860). Accessed July 2021 at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=5471860&agglevel=district&year=2019-20

[5] Tulare County Office of Education. Cutler-Orosi Join Unified School District. Average Daily Attendance. Accessed July 2021 at: http://www.tcoe.org/Districts/CutlerOrosi.shtm.

"The Cutler-Orosi Joint Unified School District has been in the process of developing the Orosi High School Recreation Complex (approximately 32-acres) located at 41815 Road 128 in Orosi, California. Phase I currently contains football, soccer, baseball, and softball fields that were constructed in the spring/summer of 2019. The Orosi High School Recreation Complex Phase II proposes the installation of 19 light standards within the previously developed recreational complex area in Orosi, California. Eight 70-foot light standards would be installed around the existing football field and junior varsity soccer field, six 60- to 80-foot light standards would be installed around the existing baseball field, and five 60- to 70-foot light standards would be installed around the existing softball field (see Figure 18 [in the Update, **Figure 3.16-1** in this Draft EIR])."[6]

Figure 3.16-1
Orosi High School Recreation Sports Park

The nearest park to Cutler-Orosi is Ledbetter Park located at 40779 Road 124 in Cutler.[7] The next nearest County owned/operated parks are Cutler Park (approximately 12 miles southeast, adjacent to the St. John's River) and Kings River Nature Preserve (approximately 11.5 miles west). **Table 3.16-2** contains a list of Recreational areas and facilities in Tulare County. Also, since adoption of the General Plan, new parks have been developed in the unincorporated communities of Plainview and Earlimart.

[6] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Pages 89-90. Included in Appendix "F" of this Draft EIR.
[7] Ibid.

Table 3.16-1
Recreational Areas in Tulare County[8]

ID	Recreation Area	Location	Acres	Type of Use/Features
County				
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp COTYAC	Near Ponderosa in Eastern Tulare County.	8	County of Tulare Youth Adventure Camp (Camp COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on SR 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
7	Kings River Nature Preserve	2 miles east of SR 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County Museum	In Mooney Grove Park, South Visalia, east of SR 63.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.
State				
14	Colonel Allensworth State Historic Park	7 miles west of Earlimart on County Road J22.	3,715	15 campsites, open year round.
15	Mountain Home State	Located in Sequoia National Forest	4,807	No reservations taken for campgrounds.

[8] Ibid. Table 4-1. 4-4.

Table 3.16-1
Recreational Areas in Tulare County[8]

ID	Recreation Area	Location	Acres	Type of Use/Features
	Forest			
Federal				
16	Lake Kaweah	25 miles east of Visalia off SR 198.	2,558	Horse Creek Campground, boat ramps, picnic areas, swimming, and hiking.
17	Lake Success	10 miles SE of Porterville off SR 198.	2,450	Tule Campground, boating, fishing, picnic areas, playgrounds, and softball field. Hunting is permitted in the Wildlife Management Area.
18	Sequoia National Forest	Southeastern portion of Tulare County.	na	Campgrounds include Gray's Meadow, Oak Creek, Onion Valley, Stony Creek, Sunset, and Whitney Portal with over 300 campsites.
19	Giant Sequoia National Monument	Covers areas north and south of Sequoia and Kings Canyon National Parks.	na	
20	Sequoia and Kings Canyon National Parks (SEKI)	Northeastern portion of Tulare County.	na	Campgrounds include Atwell Mill Campground, Buckeye Flat, Cold Springs, Crystal Springs, Dorst Campground, Lodgepole, Moraine, Potwisha, Sheep Creek, and South Fork with over 800 campsites.
Total Acres			**5,701**	

Federal Recreation Areas

Lake Kaweah

"Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake's Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching."[9]

Lake Success

"Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking. The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located

[9] Tulare County General Plan 2030 Update Background Report. February 2010. Page 4-7 Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf.

eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area."[10]

National Parks and National Forests

"Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer."[11] See **Table 3.16-2** for a list of National Park and Forest facilities.

Sequoia National Forest

"Sequoia National Forest takes its name from the Giant Sequoia, which is the world's largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and Mexico crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year."[12]

Giant Sequoia National Monument

"The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail."[13]

Sequoia and Kings Canyon National Parks (SEKI)

"The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks,

[10] Ibid.
[11] Op. Cit. 4-8.
[12] Ibid.
[13] Ibid. 4-9.

and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges, the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.4 million people visit the two parks on an annual basis."[14]

Table 3.16-2
National Park and Forest Facilities

Recreation Area	Location	Camping Sites
Sequoia National Forest		
Gray's Meadow	5 miles West of Independence on Onion Valley Road.	52 tent/RV sites
Oak Creek	4 ½ miles NW of Independence off Highway 395.	21 tent/RV sites
Onion Valley	14 miles West of Independence on Onion Valley Road.	29 tent/RV sites
Stony Creek	14 miles SE of Grant Grove on Generals Highway.	49 tent/RV sites
Whitney Portal	13 miles West of Lone Pine on Whitney Portal Road.	43 tent/RV sites
Total		**194 sites**
Kings Canyon and Sequoia National Park		
Atwell Mill	Sequoia, 19 miles from Highway 198 on Mineral King Road.	21 tent sites
Azalea	Kings Canyon, 3 ½ miles from Kings Canyon Park entrance.	110 tent sites
Buckeye Flat	Sequoia, 11 miles South of Giant Forest of Generals Highway.	28 tent sites
Canyon View	Cedar Grove in Kings Canyon	23 tent sites
Cold Springs	Sequoia, Mineral King Area.	25 tent sites
Crystal Springs	Kings Canyon, ½ mile North of Grant Grove.	67 tent/RV sites
Dorst Creek	Sequoia, 9 miles North of Lodgepole off Generals Highway.	210 tent/RV sites
Lodgepole	Sequoia, 4 miles NE of Cedar Grove.	203 tent/RV sites
Moraine	Kings Canyon, 1 mile East of Cedar Grove.	120 tent/RV sites
Potwisha	Sequoia, 4 miles NE of Ash Mountain entrance off Generals Highway.	42 tent/RV sites
Sentinel	In the Cedar Grove area near the Kings River.	82 tent sites
Sheep Creek	Kings Canyon, 1/2-mile West of Cedar Grove.	111 tent/RV sites
South Fork	Sequoia, 13 miles on South Fork from Highway 198.	10 tent sites
Sunset	In the Grant Grove area 3 miles from Kings Canyon park entrance.	157 tent sites
Total		**1,209 sites**

Source: Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

State Parks and Forests

Colonel Allensworth State Park

"The only State Park in Tulare County is Colonel Allensworth State Historic Park discussed in Section 9.3. The park contains a museum and a visitor center addressing the town's history, as

[14] Ibid.

well as camping facilities. Allensworth is the only California town to be founded, financed and governed by African Americans. The small farming community was founded in 1908 by Colonel Allen Allensworth and a group of others dedicated to improving the economic and social status of African Americans. Uncontrollable circumstances, including a drop in the area's water table, resulted in the town's demise. With continuing restoration and special events, the town is coming back to life as a state historic park. The park's visitor center features a film about the site. A yearly rededication ceremony reaffirms the vision of its pioneers."[15]

Mountain Home State Forest

"The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest."[16]

Other Recreational Facilities

Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.[17]

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust.

Table 3.16-3
County and State Recreational Areas in Tulare County

ID	Recreation Area	Location	Acres	Type of Use/Features
County				
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp COTYAC	Near Ponderosa in Eastern Tulare County.	8	County of Tulare Youth Adventure Camp (Camp COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.

[15] Ibid. 4-3.
[16] Ibid. 4-7.
[17] Ibid. 4-10 and 4-11

Table 3.16-3
County and State Recreational Areas in Tulare County

ID	Recreation Area	Location	Acres	Type of Use/Features
7	Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, and baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County Museum	In Mooney Grove Park, South Visalia.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.
State				
14	Colonel Allensworth State Historic Park	7 miles west of Earlimart on County Road J22.	na	15 campsites, open year round.
15	Mountain Home State Forest	Located in Sequoia National Forest	na	No reservations taken for campgrounds.
Total Acres			**693**	

Source: Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

Incorporated cities in the County also have a number of recreational facilities including neighborhood parks, play lots, pocket parks and other recreation facilities."[18] The City of Dinuba has several small parks and recreational areas; the nearest to the proposed Project is Rose Ann Vuich Park (which is located approximately five miles west).

REGULATORY SETTING

The following environmental regulatory settings were summarized, in part, from information contained in the *Tulare County General Plan 2010 Background Report*.

Federal Agencies & Regulations

United States National Park Service (NPS)

"The National Park Service (NPS) is a bureau of the U.S. Department of the Interior. The NPS manages the 397 units of the National Park System. The NPS also helps administer dozens of

[18] Op. Cit. 3.9-29.

affiliated sites, the National Register of Historic Places, National Heritage Areas, National Wild and Scenic Rivers, National Historic Landmarks, and National Trails."[19]

State Agencies & Regulations

California Department of Parks and Recreation

"Our Mission

To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.

California Department of Parks and Recreation

Parks are essential to the well-being of environments, economies and all people. California's state parks and the recreational programs supported by the California Department of Parks and Recreation and its divisions of Boating and Waterways, Off-Highway Motor Vehicle Recreation, and Office of Historic Preservation, are gateways to these benefits and to opportunities to connect with families, friends, and communities.

With 280 state park units, over 340 miles of coastline, 970 miles of lake and river frontage, 15,000 campsites, and 4,500 miles of trails, the department contains the largest and most diverse recreational, natural, and cultural heritage holdings of any state agency in the nation.

More than 75 million people annually visit California's State Park System. The system includes:

Beaches
Coastal Beaches
Conference Centers
Ghost Towns
Historic Homes
Historic Monuments
Historic Parks
Lakes and Reservoirs
Lighthouses
Marine parks
Museums
Natural and Cultural Preserves
Natural Reserves
Off-Highway Vehicle Recreation Areas
Parks
Recreation Areas
Seashores
Spanish-era Adobe Buildings
Visitor Centers

Together, state park system lands protect and preserve an unparalleled collection of culturally and environmentally sensitive structures and habitats, threatened plant and animal species, ancient Native American sites, historic structures and artifacts... the best of California's natural and cultural history."[20]

[19] National Park Service Overview Brochure. Updated May 2011 [new version anticipated soon]. Accessed July 2021 at: https://www.nps.gov/aboutus/index.htm

[20] California Department of Parks and Recreation. About Us. Accessed July 2021 at: https://www.parks.ca.gov/?page_id=91

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-5.2 Park Amenities - The County shall provide a broad range of active and passive recreational opportunities within community parks. When possible, this should include active sports fields and facilities, community center/recreation buildings, children's play areas, multi-use areas and trails, sitting areas, and other specialized uses as appropriate.

ERM-5.3 Park Dedication Requirements - The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.

ERM-5.5 Collocated Facilities - The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.

ERM-5.11 Cooperation with Federal and State Agencies - The County shall work with Federal and State agencies that manage land within the County, as appropriate.

ERM-5.12 Meet Changing Recreational Needs - The County shall promote the continued and expanded use of national and State forests, parks, and other recreational areas to meet the recreational needs of County residents.

ERM-5.15 Open Space Preservation - The County shall preserve natural open space resources through the concentration of development in existing communities, use of cluster development techniques, maintaining large lot sizes in agricultural areas, discouraging conversion of lands currently used for agricultural production, limiting development in areas constrained by natural hazards, and encouraging agricultural and ranching interests to maintain natural habitat in open space areas where the terrain or soil is not conducive to agricultural production.

IMPACT EVALUATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Project Impact Analysis: ***Less Than Significant Impact***

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that

is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

Ledbetter Park currently serves as the only County owned/operated park within the Planning Area. It is approximately 11 acres in size and is located in Cutler at the intersection of SR 63/Road 124 and Avenue 408. As the Planning Area's growth is consistent with the General Plan's 1.3% projected annual growth rate from 2007 to 2030, it is possible that future park facilities may be necessary. General Plan parkland-related policies will be implemented as applicable to accommodate planned growth in population. Therefore, a ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

As such, ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

As such, as noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Therefore, the proposed Project will result in ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Therefore, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Therefore, the proposed Project will The nearest park to Cutler-Orosi is Ledbetter Park, and it is located at 40779 Road 124 in Cutler. As noted in the 2010 General Plan Background Report, the unincorporated areas of Tulare County have a 1.3% projected annual growth rate from 2007 to 2030. This 1.3% annual growth rate can be applied to Cutler-Orosi too. Therefore, a ***Less Than Significant Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County General Plan 2030 Update EIR.

As such, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Compliance with applicable policies of the Tulare County General Plan and proposed Community Plan Update will reduce recreational impacts to ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

ABBREVIATIONS and ACRONYMS

CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
UDB	Urban Development Boundary

REFERENCES

California Dept. of Parks and Recreation. Accessed July 2021 at http://www.parks.ca.gov/?page_id=91

California Environmental Quality Act (CEQA) Guidelines, Section 15126.2 (a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

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Transportation/Traffic
Chapter 3.17

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impacts*** related to Transportation and Traffic through the Year 2030 Planning horizon. The *"Cutler-Orosi Community Plan Update Transportation Impact Study Report* [TIS]*"* prepared by consultant VRPA Technologies; Inc. (which is included in Appendix "E" of this document) is used as the basis for these findings. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Transportation and Traffic. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate

any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Transportation and Traffic in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance.

- Result in a Level of Service (LOS) less than "D"
- Unsafe roadway/circulation design
- Impact Air Traffic
- Dangerous Site Design
- Inadequate Access
- Need for additional Public Transit
- Need for additional Bike Facilities
- Need for additional Pedestrian Facilities

Traffic Reports

"The following criterion is a starting point in determining when a TIS [traffic impact study] is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility.
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS "C" or "D").
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis:
   a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS "E" or "F").
   b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).

[1] CEQA Guidelines. Section 15126.2 (a).

c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.)."[2]

ENVIRONMENTAL SETTING

"Tulare County has two major regional highways, State Highway 99 and 198. State Highway 99 connects Tulare County to Fresno and Sacramento to the north and Bakersfield to the south. SR 198 connects from U.S. Highway 101 on the west and continues eastward to Tulare County, passing through the City of Visalia and into Sequoia National Park. The highway system in the County also includes State highways, County-maintained roads, and local streets within each of the eight cities."[3]

"Tulare County's transportation system is composed of several State Routes, including three freeways, multiple highways, as well as numerous county and city routes. The county's public transit system also includes two common carriers (Greyhound and Orange Belt Stages), the AMTRAK Service Link, other local agency transit and paratransit services, general aviation, limited passenger air service and freight rail service."[4]

"Some prominent county roadways include, but are not limited to, Alta Avenue (Road 80), Caldwell Avenue/Visalia Road (Avenue 280), Demaree Road/Hillman Street (Road 108), Tulare Avenue (Avenue 232), Olive Avenue (Avenue 152), Spruce Road (Road 204), El Monte Way (Avenue 416), Paige Avenue (Avenue 216), Farmersville Boulevard (Road 164), Road 192, and Road 152. Additionally, the highway system includes numerous county-maintained local roads, as well as local streets and highways within each of the eight cities and several unincorporated communities."[5]

"Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County."[6]

TCAG provides a description of Road Capacity and Level of Service in the 2018 RTP as:

[2] California Department of Transportation (Caltrans). Guide for the Preparation of Traffic Impact Studies. December 2002. Page 2. Accessed July 2021 at: https://nacto.org/docs/usdg/guide_preparation_traffic_impact_studies_caltrans.pdf
[3] Tulare County General Plan 2030 Update. Page 13-2. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/GeneralPlan2030Update.pdf
[4] Tulare County General Plan 2030 Update. Background Report. Page 5-4. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf
[5] Ibid. 5-7.
[6] Op. Cit. 5-4.

"Capacity

According to the 2010 Highway Capacity Manual (HCM), capacity is defined as "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic and control conditions, usually expressed as vehicles per hour or persons per hour." The ratio of the roadway volume to its capacity, V/C, can be useful in determining the preliminary Level of Service (LOS) of a roadway.

*V*olume = Actual number of vehicles.
*C*apacity = Maximum number of vehicles on a particular segment of roadway during a specific time frame

Level of Service (LOS)

LOS is categorized by two parameters: uninterrupted flow and interrupted flow. Uninterrupted flow facilities have no fixed elements, such as traffic signals, that cause interruptions in traffic flow (e.g., freeways, highways, and controlled access, some rural roads). Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs and signalized intersections. The definitions and measurements used for determining level of service in interrupted and uninterrupted conditions are shown below:

Uninterrupted Traffic Flow Facilities

LOS A: Describes free-flow operations. Free-Flow Speed (FFS) prevails on the freeway, and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.

LOS B: Represents reasonably free-flow operations, and FFS on the freeway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

LOS C: Provides for flow with speeds near the FFS of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

LOS D: At this level speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E: Describes operation at capacity. Operations on the freeway at this level are highly volatile because there are virtually no useable gaps within the traffic stream, leaving little room

to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.

LOS F: Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks. Breakdowns occur for a number of reasons:

Traffic incidents can temporarily reduce the capacity of a short segment, so that the number of vehicles arriving at a point is greater than the number of vehicles that can move through it.

Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles that can be discharged.

In analyses using forecast volumes, the projected flow rate can exceed the estimated capacity of a given location.

Interrupted Traffic Flow Facilities

LOS A: Describes operations with a control delay of 10 seconds/vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B: Describes operations with a control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A, with reasonably unimpeded travel between intersections.

LOS C: Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e.one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. May be longer queues and operations between locations may be more restricted.

LOS D: Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. Travel speeds are about 40 percent below free flow speeds. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are

noticeable.

LOS E: Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent. Average travel speed is one-third of free flow speeds. The facility is generally at full capacity. LOS F: Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue. Extremely slow speeds with average delay of 80 seconds or more. Frequent stop and go conditions

> Caltrans policy defines LOS D as an acceptable operating condition when planning for future state facilities in urbanized areas. TCAG monitors traffic levels of service on the regional roads. An LOS of D or better is the goal on urban roads, and C on rural roads."[7]

Existing Transportation Conditions

"Orosi have an excellent circulation system in terms of access to other parts of the County. SR 201 and several County roads provide access to SR 99, 20 miles to the west, and the foothill region to the east. SR 99 is an important route used by industry to move goods to the southern and northern parts of the State. It also provides commuters with access to the Central Valley's larger metropolitan areas. SR 63 is another major north/south route in this region. It connects Cutler-Orosi with Visalia and it is the prime route between the two communities.

The communities also have a local circulation system, that when completed, will tie them together and create an excellent framework from which minor neighborhood streets can be built. Roads 120, 124, 128 SR 63, 130, and 136 traverse the planning area in a north/south fashion and Avenues 425, 416, 408, and 400 (SR 201) are laid out on an east-west axis. Several roadways must either be built or widened in order to create an efficient circulation system. Most notably, there is an absence of a north-south road east of SR 63 which would connect Cutler to Orosi, and a road system southwest of Cutler which would "open up" land for industrial development."[8]

"The internal circulation system of Cutler-Orosi is composed of paved streets with a curb-to-curb width of 40 feet. These "minor" streets provide circulation within each neighborhood of the community. Although they all have ample capacity for additional traffic, the condition of some of these streets is poor because they lack curbs and/or gutters or their pavement condition is deteriorating. Further, there are numerous areas in Orosi, which are composed of large-lot rural residential development and are not "linked" to adjacent neighborhoods."[9]

[7] TCAG 2018 Regional Transportation Plan. Action Element. Pages B-7 through B-9. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/action-element/

[8] Draft Cutler-Orosi Community Plan 2021 Update. Page. 207. Included in Appendix "F" of this Draft EIR.

[9] Ibid. 233.

Street and Highway System

Functional classification is the process by which streets and highways are grouped into classes according to the type of service they provide. Streets and highways are classified according to their primary function and may be assigned into several basic classifications:

- State Highways (which may be freeways, expressways or conventional highways)
- Arterials and Collectors
- Local Streets

"**State Highways (which may be freeways, expressways or conventional highways) –** Connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas. There are two designated State Routes within the Planning Area.

- State Route 63
- State Route 201"

"State Highways: State Route 63 and State Route (SR) 201 are the principle state highways serving Cutler-Orosi. "Cutler and Orosi have an excellent circulation system in terms of access to other parts of the County. SR 201 and several County roads provide access to SR 99, 20 miles to the west, and the foothill region to the east. SR 99 is an important route used by industry to move goods to the southern and northern parts of the State. It also provides commuters with access to the Central Valley's larger metropolitan areas. SR 63 is another major north/south route in this region. It connects Cutler and Orosi with Visalia and it is the prime route between the two communities."[10].

"Arterials – Serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.

- Avenue 416 is an arterial in the Cutler-Orosi community."[11]

"The communities also have a local circulation system, that when completed, will tie them together and create an excellent framework from which minor neighborhood streets can be built. Roads 120, 124, 128 SR 63, 130, and 136 traverse the planning area in a north/south fashion and Avenues 425, 416, 408, and 400 (SR 201) are laid out on an east-west axis. Several roadways must either be built or widened in order to create an efficient circulation system. Most notably,

[10] Op. Cit. 207.
[11] Op Cit. 207.

there is an absence of a north-south road east of SR 63 which would connect Cutler to Orosi, and a road system southwest of Cutler which would "open up" land for industrial development."[12]

"Collectors – Provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.

Local Streets – Provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

- All streets in the Circulation network are classified as local streets

Public Transportation

"Public transportation in Tulare County also takes the form of shared-ride companies, carpools, and vanpools. Fixed route transit is generally used in the more populated urban areas while demand responsive transit and blended paratransit are often used in rural areas and communities. Several regional programs and service exist in Tulare County. All transit providers participate in the T-Pass, which provides unlimited monthly fixed route rides, College of Sequoias Student Pass, which provided unlimited fixed route rides for students with their paid student fees, and the Greenline call center. Mass transportation has the capability to reduce a large number of single vehicle occupancy trips and reduce emissions. All fixed-route providing public transit agencies in Tulare County have fleets of Compressed Natural Gas (CNG) vehicles and CNG fueling stations. Porterville and Visalia have begun procurement of electric buses that are scheduled to operational in 2018"[13]

Airports/Aviation

"A public-use airport is a publicly or privately owned airport that offers the use of its facilities to the public without prior notice, invitation, or clearance, and has been issued a California Airport Permit by the California Department of Transportation (Caltrans) Division of Aeronautics. There are seven airports in Tulare County that meet the "public use" criterion and their locations are illustrated on Figure 1-1 [of the [Comprehensive Airport Land Use Plan, CALUP]. These public-use airports include:

- Visalia Municipal Airport
- Porterville Municipal Airport
- Tulare Municipal Airport – Mefford Field
- Woodlake Municipal Airport
- Sequoia Field
- Exeter Airport (formerly Thunderhawk Field)

[12] Op. Cit.
[13] TCAG. RTP 2018. Action Element. Page B-52. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/action-element/.

- Eckert Field

Two airports included in the previous edition of this CALUP, specifically Alta Airport and Harmon Field, have been permanently closed and have been removed from this plan [the CALUP]."[14]

"Fresno Yosemite International Airport (FAT), 30 miles northwest of Cutler-Orosi, is the principal passenger airfreight airport in the central San Joaquin Valley. Visalia Municipal Airport, 11 miles southeast, offers passenger service to Los Angeles."[15]

Design for Emergency Access

According to § 21060.3 and § 15359 of the CEQA Guidelines, an "Emergency" means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. A Proposed Project could potentially generate impacts through inadequate design for emergency access.

Complete Streets and Alternative Transportation

As indicated in the 2018 RTP, "The Tulare County Resource Management Agency (RMA) is committed to fully integrating modal options in its General Plan and various Community Plans within Tulare County. This includes supporting projects that enhance walking and bicycling infrastructure. Additionally, RMA will improve access to public transportation facilities and services. This includes supporting urban development patterns and Americans with Disabilities Act (ADA) infrastructure that allow for greater accessibility to transit stops and stations. Finally, RMA continues to improve safety for all users and encourages street connectivity to create a comprehensive, integrated and connected circulation network. Each Complete Streets Policy Includes:

- Vision, Priorities, Goals, Objectives and Policies
- Cost Estimates and Funding Options
- Phasing and Projects Lists
- Circulation and Modes Plan
- Road Maintenance Plan
- Outreach Efforts."[16]

"The Board of Supervisors approved the Complete Streets Program in December 2016. The Complete Streets Programs Goals, Policies, Objectives, and Standards are hereby incorporated by

[14] Tulare County. Comprehensive Airport Land Use Plan (CALUP). Adopted November 2012. Page 1-1. Accessed July 2021 at: https://tularecounty.ca.gov/rma/index.cfm/rma-documents/planning-documents/tulare-county-comprehensive-airport-land-use-plan/.
[15] Draft Cutler-Orosi Community Plan 2021 Update. Page. 225. Included in Appendix "F" of this Draft EIR.
[16] TCAG. 2018 RTP. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/executive-summary/

reference. Included in the plan were policies and implementation measures as provided in Attachment A-6 [of the Update]. Included in the plan were policies and implementation measures as provided below. These projects have been included on the TCAG Measure R list as Complete Streets.

Cutler

1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Road
5. First Drive – SR 63 to Road 124

Orosi

1. Avenue 413 – Road 124 to SR 63
2. Avenue 419
3. Avenue 416 – SR-63 to Dinuba
4. Road 130 (Strong interest from school district)
5. Road 124"[17]

Transit

"The Tulare County Area Transit Agency (TCaT) operates fixed-route services that link communities with each other and with Visalia and Dinuba's urban transit systems. Cutler-Orosi (see Figure 32 [in the Update]) is connected via TCaT North County Route 10. Route 10 (see Figure 33 [in the Update]) has twelve northbound and southbound buses serving Cutler-Orosi on weekdays and four buses in each direction on Saturdays and Sundays. Stops are currently (in 2021) located at the Road 1287 and School Avenue in Cutler-Orosi has two stops at R-N Market and Orosi Mart & Deli. (See TCaT website at http://www.tularecog.org/bustimes/). TCaT vehicles are wheelchair accessible and all full size buses include bike racks. As such, public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a community of less than one thousand residents. The low level of auto congestion in Cutler-Orosi, now and as forecasted into the future, suggests that driving will continue to be more convenient in rural communities than the use of transit for those with access to a private car."[18]

"While the private automobile is the dominant mode of travel within Cutler-Orosi, as it is throughout Tulare County, other modes of transportation are important."[19] The most recent available Census survey data for Orosi indicates that about two-third [73.3%] of commuters drive alone to work, while one-third [46.7%] use other means: 16.2 percent carpool or vanpool,

[17] Draft Cutler-Orosi Community Plan 2021 Update. Page. 217. Included in Appendix "F" of this Draft EIR.
[18] Ibid. 222.
[19] Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS). Page 22. Prepared by VRPA Technologies, Inc. and included in Appendix "E" of the Update's Draft EIR.

1.4 percent walked, 0 percent used public transportation and 9 percent worked at home."[20] While Cutler's data shows 67.4 drove alone, 20.1 carpooled, 11.7 percent worked from home, and 0 percent walked, bicycled, or used other means. "The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips, but tend to be less concentrated in peak traffic periods. Off-peak trips also tend to have a greater proportion of shared ride and active (walk and bike) trips.

While congestion is not a major issue in Cutler-Orosi, overreliance on automobiles creates other costs for both society and households, and means that many in the community who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycling and walking. The public transit system alternatives for Cutler-Orosi include fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services."[21]

Paratransit Service

"Paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped."[22]

Bicycle and Pedestrian Facilities

As noted in the Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS), "Investment in bikeways provides an inexpensive environment-friendly transportation opportunity. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. While the numbers of cyclists are small in comparison to the amount of auto traffic, the size of the community of Cutler-Orosi means that most trips within the communities can be as fast by bicycle as by car. Figure 2-5 [in the TIS, **Figure 3.17-1** in this Draft EIR] shows the existing bicycle facilities in the vicinity of the Cutler-Orosi community. There is currently a Class II bike facility along Avenue 416 west [~~of the city~~] of Orosi.

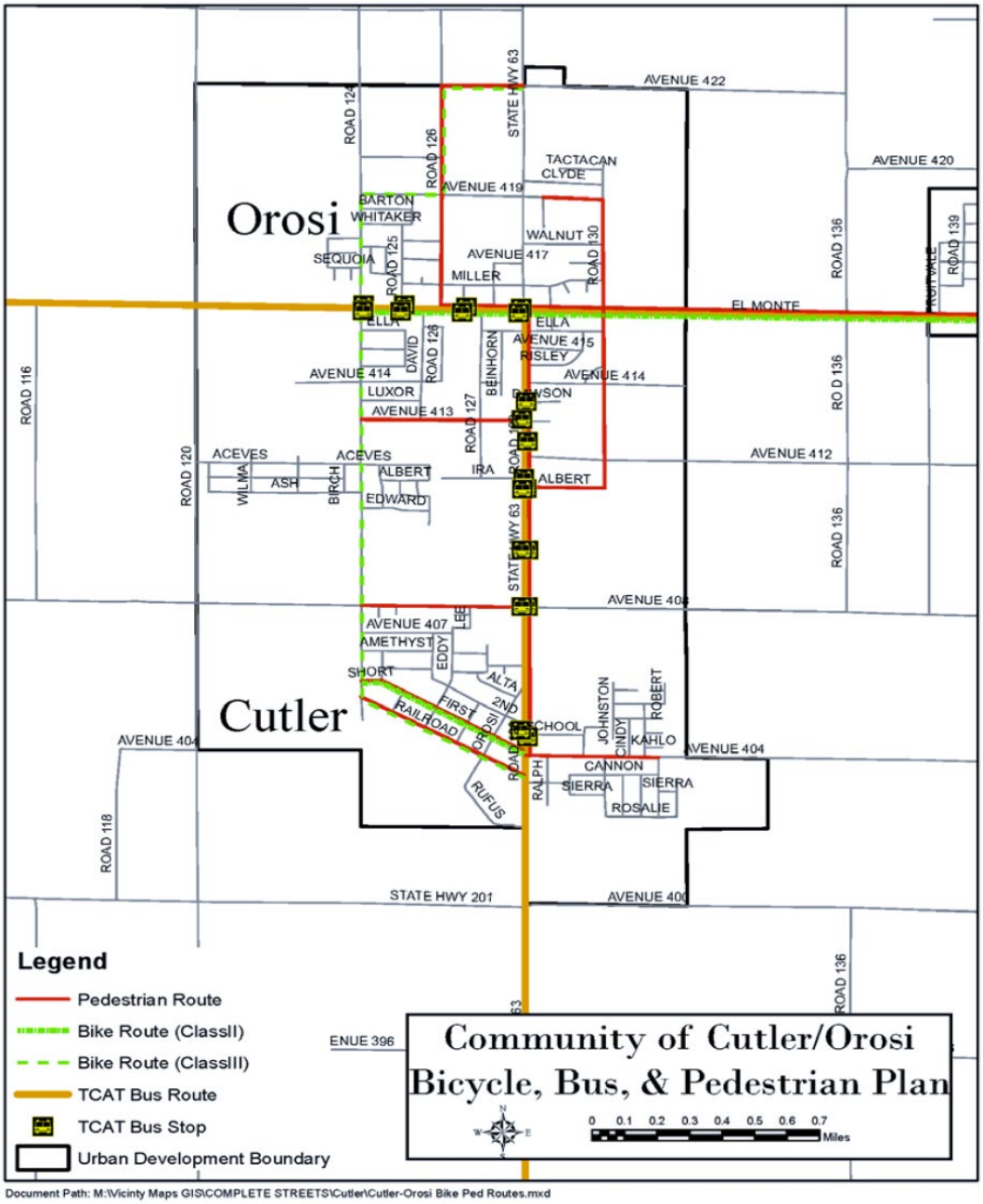
Pedestrian facilities include sidewalks, walkways, crosswalks, signals, lighting, and benches, among other items. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities serving the school and recreational facilities enhance the safety of those who choose to walk to and from these destinations."[23]

Multiuse Trails

[20] Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS). Page 22. Prepared by VRPA Technologies, Inc. and included in Appendix "E" of this Draft EIR
[21] Ibid.
[22] Op. Cit. 21.
[23] Op. Cit. 22

Multiuse trails are facilities that can be used by bicycles, pedestrians, equestrians, and other recreational users. There are neither currently existing nor multiuse trails in the Cutler-Orosi Community.[24]

Figure 3.17 – 1
Cutler-Orosi Bicycle, Bus & Pedestrian Plan Map



[24] Draft Cutler-Orosi Community Plan 2021 Update. Page. 220. Included in Appendix "F" of this Draft EIR.

Designated Truck Routes

Designated truck routes are intended to be used for long-distance truck movement. Truck movements for local deliveries within a community may use the most direct route to the particular delivery location, including local streets. The Update includes a policy that would, "Designate truck routes for use by heavy commercial and industrial traffic. Initially, designated truck routes shall be SR 63, SR 201, and Avenue 416."[25]

REGULATORY SETTING

Federal Agencies & Regulations

Federal Aviation Regulations

Sec. 77.17 — Form and time of notice

(a) Each person who is required to notify the Administrator under §77.13(a) shall send one executed form set (four copies) of FAA Form 7460–1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the construction or alteration will be located. Copies of FAA Form 7460–1 may be obtained from the headquarters of the Federal Aviation Administration and the regional offices.

(b) The notice required under §77.13(a) (1) through (4) must be submitted at least 30 days before the earlier of the following dates:
   (1) The date the proposed construction or alteration is to begin.
   (2) The date an application for a construction permit is to be filed.
   However, a notice relating to proposed construction or alteration that is subject to the licensing requirements of the Federal Communications Act may be sent to FAA at the same time the application for construction is filed with the Federal Communications Commission, or at any time before that filing.

(c) A proposed structure or an alteration to an existing structure that exceeds 2,000 feet in height above the ground will be presumed to be a hazard to air navigation and to result in an inefficient utilization of airspace and the applicant has the burden of overcoming that presumption. Each notice submitted under the pertinent provisions of this part 77 proposing a structure in excess of 2,000 feet above ground, or an alteration that will make an existing structure exceed that height, must contain a detailed showing, directed to meeting this burden. Only in exceptional cases, where the FAA concludes that a clear and compelling showing has been made that it would not result in an inefficient utilization of the airspace and would not result in a hazard to air navigation, will a determination of no hazard be issued.

(d) In the case of an emergency involving essential public services, public health, or public safety that requires immediate construction or alteration, the 30-day requirement in

[25] Ibid. 215.

paragraph (b) of this section does not apply and the notice may be sent by telephone, telegraph, or other expeditious means, with an executed FAA Form 7460–1 submitted within 5 days thereafter. Outside normal business hours, emergency notices by telephone or telegraph may be submitted to the nearest FAA Flight Service Station.

(e) Each person who is required to notify the Administrator by paragraph (b) or (c) of §77.13, or both, shall send an executed copy of FAA Form 117–1, Notice of Progress of Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area involved.

State Agencies & Regulations

Caltrans: Transportation Concept Reports

Caltrans has prepared a number concept reports for State Routes, Interstate Routes, and U.S. Routes for each of its California Districts. Tulare County is located in Caltrans District 06. The concept reports that apply to the proposed Project include SR 63 and SR 201[26].

Caltrans Guide for the Preparation of Traffic Impact Studies

"The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS)."[27]

Local Policy & Regulations

Tulare County Transportation Control Measures (TCM)

"Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

- Rideshare Programs;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;

[26] Op Cit. 119.

[27] Caltrans Guide for the Preparation of Traffic Studies. Page ii. Accessed July 2021 at: https://nacto.org/docs/usdg/guide_preparation_traffic_impact_studies_caltrans.pdf

- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities."[28]

Tulare County Association of Governments (TCAG)

"The Regional Transportation Plan is a long range plan that every Metropolitan Planning Organization (MPO) is required to complete. The plan is meant to provide a long-range, fiscally constrained guide for the future of Tulare County's transportation system. The long range plan extends to the year 2042 in its scope. The plan accomplishes its goals by forecasting future growth, identifying regional priorities, and planning for infra-structure improvements. This plan is required to include four elements; those elements include: the policy element, the sustainable community element, the action element and the financial element. These elements have been mandated by law, but do not keep MPOs from including more elements to their plan de-pending on local characteristics. Tulare County's 2018 RTP/SCS also includes chapters on goods movement and valley wide characteristics in addition to the required plan elements. The RTP/SCS is not the only plan in effect dealing with transportation issues, but is the holistic plan that integrates more specific plans into a larger framework for the county."[29] The Tulare County Association of Government has prepared the 2018 Regional Transportation Plan. Specific policies that apply to the proposed Project are listed below.

Tulare County Complete Streets - Cutler-Orosi - As contained in Appendix A of the RTP[30] includes the following proposed project within Cutler and Orosi.

Cutler
1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Rd
5. First Drive – SR 63 to Road 124

Orosi
1. Avenue 416 – SR 63 to Road 140 (East Orosi)
2. Avenue 413 – Road 124 to SR 63
3. Avenue 419
4. Avenue 416 – SR-63 to Dinuba
5. Road 130 (Strong interest from the school district)
6. Road 124

As indicated in the RTP, "There are 14 goals outlined in the Policy Element that will guide the future development of the region's transportation system. Each goal is supported by multiple

[28] Tulare County 2030 General Plan Recirculated Draft Environmental Impact Report. Page 3.2-2.
[29] TCAG 2018 RTP and SCS. Executive Summary. PDF page 3. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/executive-summary/
[30] Ibid. PDF page 5.

objectives which then are in turn supported by specific policies to best meet those objectives."[31]

Goals:		Supporting Objectives	Supporting Policies
1. Comprehensive	Provide an efficient, integrated, multi-modal transportation system for the movement of people and goods that enhances the physical, economic and social environment in the Tulare County region.	**3**	**13**
2. System Performance	Develop an efficient, maintained, and safe circulation network that maximizes circulation, longevity, and fiscal responsibility while minimizing environmental impacts.	**9**	**30**
3. Transit	Provide a safe, secure, coordinated and efficient public transit system that can reasonably meet the needs of residents.	**3**	**21**
4. Aviation	Support development of a regional system of airports that meets the air commerce and general aviation needs of the County.	**1**	**2**
5. Rail	Promote safe, economical and convenient rail systems and schedules that meet the needs of passenger and freight rail services in the region.	**2**	**9**
6. Goods Movement	Provide a transportation system that efficiently and effectively transports goods to, from, within, and through Tulare county.	**1**	**3**
7. Goods Movement	Improve goods movement within the region to increase economic vitality, meet the growing needs of freight and passenger services, and improve traffic safety, air quality and overall mobility.	**1**	**3**
8. Active Transportation	While maintaining safety and convenience, improve, enhance and expand the region's bicycle and pedestrian systems and connectivity to those systems.	**3**	**19**
9. Regional Roads & Corridors	Preserve and enhance regional transportation roads and corridors.	**3**	**6**
10. Air Quality & GHG	Promote the improvement of air quality and greenhouse gas reductions through congestion management, coordination of land use, housing and transportation system, provision of alternative modes of transportation and provision of incentives that reduce vehicle miles traveled.	**3**	**10**
11. Public Health	Promote public health in the region by providing opportunities for residents to bicycle and walk to destinations such as; home, school, medical facilities and businesses.	**1**	**2**
12. TSM Strategies, TDM Measures, TCMs & ITS	Improve transportation mobility and operation by improving and utilizing TSM strategies, TDM measures, TCMs and ITS programs.	**4**	**21**
13. Environmental Justice	Endure that transportation investments do not discriminate on the basis of race, color, national origin, sex, age or disability.	**2**	**5**
14. Emerging Tech	Support the development and implementation of emerging technologies in the surface transportation system.	**2**	**6**

[31] Ibid.

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

LU-7.3 Friendly Streets - The County shall encourage new streets within UDBs to be designed and constructed to not only accommodate traffic, but also serve as comfortable pedestrian and cyclist environments. These should include, but not be limited to:

1. Street tree planting adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and automobiles, where appropriate,
2. Minimize curb cuts along streets,
3. Sidewalks on both sides of streets, where feasible,
4. Bike lanes and walking paths, where feasible on collectors and arterials, and
5. Traffic calming devices such as roundabouts, bulb-outs at intersections, traffic tables, and other comparable techniques.

LU-7.4 Streetscape Continuity - The County shall ensure that streetscape elements (e.g., street signs, trees, and furniture) maintain visual continuity and follow a common image for each community.

LU-7.6 Screening - The County shall require landscaping to adequately screen new industrial uses to minimize visual impacts.

TC-1.14 Roadway Facilities - As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.

TC-1.15 Traffic Impact Study - The County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS "D" or worse occurs, will be required to prepare and submit this study. The traffic impact study will include impacts from all vehicles, including truck traffic.

TC-1.16 County Level of Service (LOS) Standards - The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual.

TC-5.3 Provisions for Bicycle Use - The County shall work with TCAG to encourage local government agencies and businesses to consider including bicycle access and provide safe bicycle parking facilities at office buildings, schools, shopping centers, and parks.

TC-5.4 Design Standards for Bicycle Routes - The County shall utilize the design standards adopted by Caltrans and as required by the Streets and Highway Code for the development, maintenance, and improvement of bicycle routes.

TC-5.8 Multi-Use Trails - The County shall encourage the development of multi-use corridors (such as hiking, equestrian, and mountain biking) in open space areas, along power line transmission corridors, utility easements, rivers, creeks, abandoned railways, and irrigation canals.

HS-1.9 Emergency Access - The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

Complete Streets Policies

Complete Street Goals

The purpose of the RMA Complete Streets Policy is to create a comprehensive and uniform Complete Streets vision and policy for Tulare County. This will allow the implementing entities to incorporate Complete Streets guidelines and standards into both development and redevelopment actions. The County's goals are:

- Tulare County's transportation network will be supported through a variety of feasible transportation choices, which allows for sustainable growth.
- The livability of neighborhoods and commercial centers located along the County's transportation corridors will be enhanced by a safe and inviting pedestrian environment.
- The design of multimodal roadway facilities will not compromise the needs of larger vehicles such as transit vehicles, fire trucks and freight delivery trucks.
- Inclusion of Complete Streets design elements will allow for design flexibility on different street functions and neighborhood contexts.
- Inclusion of Complete Streets design elements will improve the integration of land use and transportation, while encouraging economic revitalization through infrastructure improvements.

Complete Streets Objectives

- To create an integrated and connected transportation network that supports transportation choices and sustainable growth.
- To ensure that all transportation modes are accommodated to the extent possible in all public roadway facilities in the County.
- To develop and use the latest design standards and guidelines in the design of Complete Streets.
- To provide flexibility in the implementation of this policy so that streets

chosen for implementation of Complete Streets elements can be developed to fit within the context of their principal purpose and surroundings without compromising the safety of users and needs of larger vehicles.

Tulare County General Plan Policies

The Tulare County General Plan Update (2030) in complying with AB 1358 calls for 4 Complete Streets related principles including:

Principle 1: County-wide Collaboration - Support countywide transportation plans that provide choices in travel modes.

Principle 2: Connectivity - Emphasize connectivity among cities, communities, and hamlets to ensure County residents have access to jobs and services.

Principle 3: Community Circulation - Anticipate and provide transit, traffic, and roadway connections that support the interconnectivity of all communities.

Principle 4: Pedestrian and Bicycle Facilities - Plan for the development and expansion of pedestrian paths and bicycle facilities that provide residents with alternative modes of travel. These principles are expressed mainly in following policies including:

- TC-1.6 Intermodal Connectivity
- TC-1.7 Intermodal Freight Villages
- TC-5.1 Bicycle/Pedestrian Trail System
- TC-5.2 Non-motorized Modes in Planning and Development

Cutler-Orosi Community Plan 2021 Update Goals

"The intent of the Cutler-Orosi Community Circulation Element is to establish a comprehensive multi-modal transportation system that is efficient, environmentally and financially sound, and coordinated with the Land Use Element."[32] The 11 Goals are summarized as follows, specific policies for these Goals can be found in the Draft Update included in Appendix F" of this document, pages 243-249.

Goal 1: Design and implement a multi-modal transportation system that will serve projected future travel demand, minimize congestion, and address future growth in Cutler-Orosi.

Goal 2: Provide designated routes and loading standards that reduce the noise and safety concerns associated with truck traffic.

[32] Draft Cutler-Orosi Community Plan 2021 Update. Page. 214. Included in Appendix "F" of this Draft EIR.

Goal 3: Provide safe and convenient pedestrian access between residential neighborhoods, parks, open space, and schools that service those neighborhoods.

Goal 4: Ensure the provision of adequate off-street parking for all land uses.

Goal 5: Provide a transportation system that is integrated with the region.

Goal 6: Encourage the use of public transit services to reduce reliance on the automobile.

Goal 7: Provide efficient goods movement

Goal 8: Provide safe and convenient facilities for non-motorized modes of transportation that enhance the future livability and character of Cutler-Orosi.

Goal 9: Design, construct, and operate the transportation system in a manner that maintains a High level of environmental quality.

Goal 10: Support the use of Transportation Demand Management (TDM) strategies to reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility along congested corridors.

Goal 11: Utilize Intelligent Transportation Systems (ITS) to improve the safety and performance of the surface transportation system using new technology in detection, communication, computing, and traffic control.

IMPACT EVALUATION

Would the project:

a) Conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Project Impact Analysis: ***Less Than Significant Impact***

The Cutler-Orosi Community Plan Transportation Impact Study (TIS) and Circulation Plan was prepared by VRPA Technologies and is included in Appendix "E" of this DEIR. An important component of the TIA was to assess existing traffic conditions, future traffic conditions, and cumulative traffic impacts as a result of the Project.

"This Transportation Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the Cutler-Orosi Community Plan Update. The TIS will provide a

policy framework to address potential traffic impacts encountered in the planning process. The TIS shall be used as a guide for establishing land use patterns that minimize traffic impacts on the community and shall include measures and solutions to address existing and foreseeable traffic conflicts."[33]

The following description of the region/project is included in the TIS, "The Cutler-Orosi Community lies within the central portion of the San Joaquin Valley. The communities are located on the Valley floor at an elevation of approximately 366 feet above sea level with the surrounding area mostly flat. Figure 1-1 [in the TIS] shows the Cutler-Orosi community in the context of its region. The transportation system within the planning area includes State Route[s] (SR) 63 and 201 in addition to several County routes and a grid of local streets as shown in Figure 1-2 [in the TIS, **Figure 3.17-2**]. The Cutler-Orosi Community is located approximately 13 miles north of the City of Visalia [, five miles east of the City of Dinuba,] and 18 miles east of the City of Selma [in Fresno County]."[34]

Study Area

"The following intersections and adjoining roadway segments included in this TIS were determined in consultation with Tulare County Resource Management Agency (RMA) and California Department of Transportation (Caltrans) staff and include:

Intersections

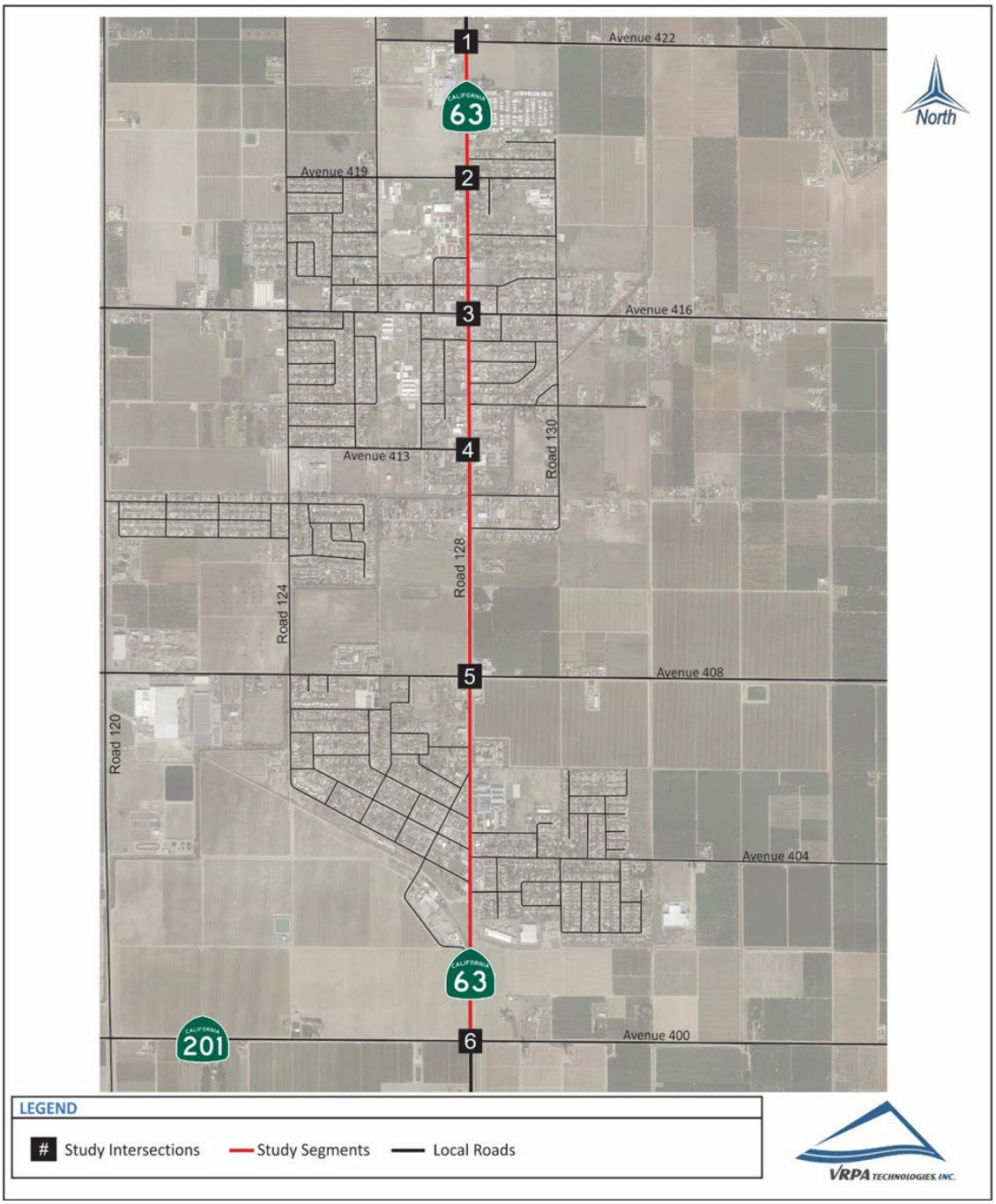
1. Road 128 (SR 63) at Avenue 422
2. Road 128 (SR 63) at Avenue 419
3. Road 128 (SR 63) at Avenue 416
4. Road 128 (SR 63) at Avenue 413
5. Road 128 (SR 63) at Avenue 408
6. Road 128 (SR 63) at Avenue 400 (SR 201)

Roadway Segments

1. Road 128 (SR 63):
   - ✓ Avenue 422 to Avenue 419
   - ✓ Avenue 419 to Avenue 416
   - ✓ Avenue 416 to Avenue 413
   - ✓ Avenue 413 to Avenue 408
   - ✓ Avenue 408 to Avenue 400 (SR 201)

[33] Cutler-Orosi Community Plan Update Transportation Impact Study (TIS). Page 1. Prepared by VRPA Technologies, February 2018, and included as Appendix "E" of this DEIR.
[34] Ibid.

Figure 3.17-2
Study Area Intersections and Segments



Study Scenarios

The TIS completed for the proposed Project includes level of service (LOS) analysis for the following traffic scenarios:

- ✓ Existing Year 2018 Conditions
- ✓ Future Year 2040 No Build Conditions
- ✓ Future Year 2040 Plus Build Conditions"[35]

Methodology

"When preparing a TIS, guidelines set by affected agencies are followed. In analyzing street and intersection capacities the Level of Service (LOS) methodologies are applied. LOS standards are applied by transportation agencies to quantitatively assess a street and highway system's performance. In addition, safety concerns are analyzed to determine the need for appropriate mitigation resulting from increased traffic near sensitive uses and other evaluations such as the need for signalized intersections or other improvements."[36]

Intersection Analysis

Intersection LOS analysis was conducted using the Synchro 10 software program. Synchro 10 supports the Highway Capacity Manual (HCM) 6th Edition methodologies and is an accepted program by Tulare County staff for assessment of traffic impacts. Levels of Service can be determined for both signalized and unsignalized intersections.

Tables 1-1 and 1-2 [in the TIS] indicate the ranges in the amounts of average delay for a vehicle at signalized and unsignalized intersections for the various levels of service ranging from LOS "A" to "F". LOS "A" represents the best operating conditions and LOS "F" represents the worst operating conditions. For signalized intersections, LOS operations are based on an intersection's average control delay expressed in seconds per vehicle. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 1-1 [in the TIS].

At two-way or one-way stop-controlled intersections, LOS is calculated for each controlled movement in addition to the overall LOS of the entire intersection. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

The signalized LOS standards applied to calculate intersection LOS are in accordance with the current edition of the HCM. Intersection turning movement counts and roadway

[35] Ibid. 3 and 4.
[36] Ibid. 4.

geometrics used to develop LOS calculations were obtained from field review findings and count data provided from the traffic count sources identified in Section 2.1[in the TIS].

When an unsignalized intersection does not meet acceptable LOS standards, the investigation of the need for a traffic signal shall be evaluated. The latest edition of the California Manual on Uniform Traffic Control Devices (California MUTCD) introduces standards for determining the need for traffic signals. The California MUTCD indicates that the satisfaction of one or more traffic signal warrants does not in itself require the installation of a traffic signal. In addition to the warrant analysis, an engineering study of the current or expected traffic conditions should be conducted to determine whether the installation of a traffic signal is justified. The California MUTCD Peak Hour Warrant (Warrant 3) will be used, as necessary, to determine if a traffic signal is warranted at unsignalized intersections that fall below current LOS standards."[37]

Roadway Segment Analysis

"According to the HCM, LOS is categorized by two parameters of traffic: uninterrupted and interrupted flow. Uninterrupted flow facilities do not have fixed elements such as traffic signals that cause interruptions in traffic flow. Interrupted flow facilities do have fixed elements that cause an interruption in the flow of traffic, such as stop signs and signalized intersections along arterial roads. A roadway segment is defined as a stretch of roadway generally located between signalized or controlled intersections.

Segment LOS is important in order to understand whether the capacity of a roadway can accommodate future traffic volumes. Table 1-3 [in the TIS] provides a definition of segment LOS. The performance criteria used for evaluating volumes and capacities on the road and highway system for this study were estimated using the Modified HCM-Based LOS Tables (Florida Tables). The tables consider the capacity of individual road and highway segments based on numerous roadway variables (design speed, passing opportunities, signalized intersections per mile, number of lanes, saturation flow, etc.). These variables were identified and applied to reflect segment LOS conditions. Street segment capacity was determined using information shown in Table 1-4 [in the TIS], which comes from the Modified Arterial Level of Service Tables included in Appendix A [in the TIS]."[38]

<u>Policies to Maintain Level of Service</u>

"An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs.

[37] Ibid. 4 and 7.
[38] Ibid. 7

Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of "D" on the County roadway system (both segments and intersections).

Based on guidance from Caltrans, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadways segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

Given the LOS standards of the various agencies in the Project area, the goal of the Project is to provide LOS results that meet the minimum LOS "C" for Caltrans facilities and LOS "D" for County facilities for all intersections and segments."[39]

Existing Conditions

Existing Traffic Counts and Roadway Geometrics

"The first step toward assessing Project traffic impacts is to assess existing traffic conditions. Existing "AM and PM peak hour turning movements were collected at each study intersection by National Data and Surveying Services. Intersection turning movement counts were conducted for the peak hour periods of 7:00-9:00 AM and 4:00-6:00 PM for all key intersections on Tuesday, November 27, 2018. Traffic count data worksheets are provided in Appendix B.

Existing lane geometry is shown in Figure 2-1 [in the TIS, **Figure 3.17-3** in this Draft EIR]. Existing (2018) AM and PM peak hour traffic volumes are shown in Figures 2-2 and 2-3 [in the TIS, **Figures 3.17-4** and **3.17-5**; respectively, in the Draft EIR."[40]

Existing Functional Roadway Classification System

"Functional classification is the process by which streets and highways are grouped into classes according to the type of service they provide. Streets and highways are classified according to their primary function and may be assigned into several basic classifications:

- ✓ **State Highways** (which may be freeways, expressways or conventional highways) – Connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas.

[39] Op. Cit. 8 and 9.
[40] Op. Cit. 11.

primarily exists as an undivided four-lane road without bike lanes throughout Cutler-Orosi Community. On-street parking is currently permitted on the four-lane segments. The posted speed limit is generally 35-40 mph throughout the community (except for school zones with a posted speed of 25 mph). The posted speed limit outside of these communities is generally 55 mph. According to Caltrans' website, the average annual daily traffic (AADT) along SR 63 in the study area was approximately 12,100 south of Avenue 416 and 7,300 south of Avenue 400 in 2017.

SR 201-Avenue 400 (west of SR 63) – currently exists as an undivided two-lane road in the study area. The posted speed limit is generally 55 mph. According to Caltrans' website, the AADT along SR 201 in the study area was approximately 3,000 in 2017.

- ✓ **Arterials** – Serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.

  Avenue 416 (west of Road 130) – currently an undivided four-lane minor arterial without bike lanes, with a posted speed limit of 25 and 40 mph through the study area.

- ✓ **Collectors** – Provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers and limited direct access to abutting properties.

  Avenues 408, 413, 419, and 422 are classified as collector streets in the study area.

- ✓ Local Streets – Provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

In recent years the concept of "Complete Streets" has evolved. Under this concept, while streets may still carry a primary functional classification, the design of streets aims to allow all modes and trip purposes to be safely accommodated to the extent feasible and as warranted by local needs and conditions."[41]

[41] Op. Cit. 11 and 15.

Figure 3.17-3
Existing Lane Geometry - Study Intersections

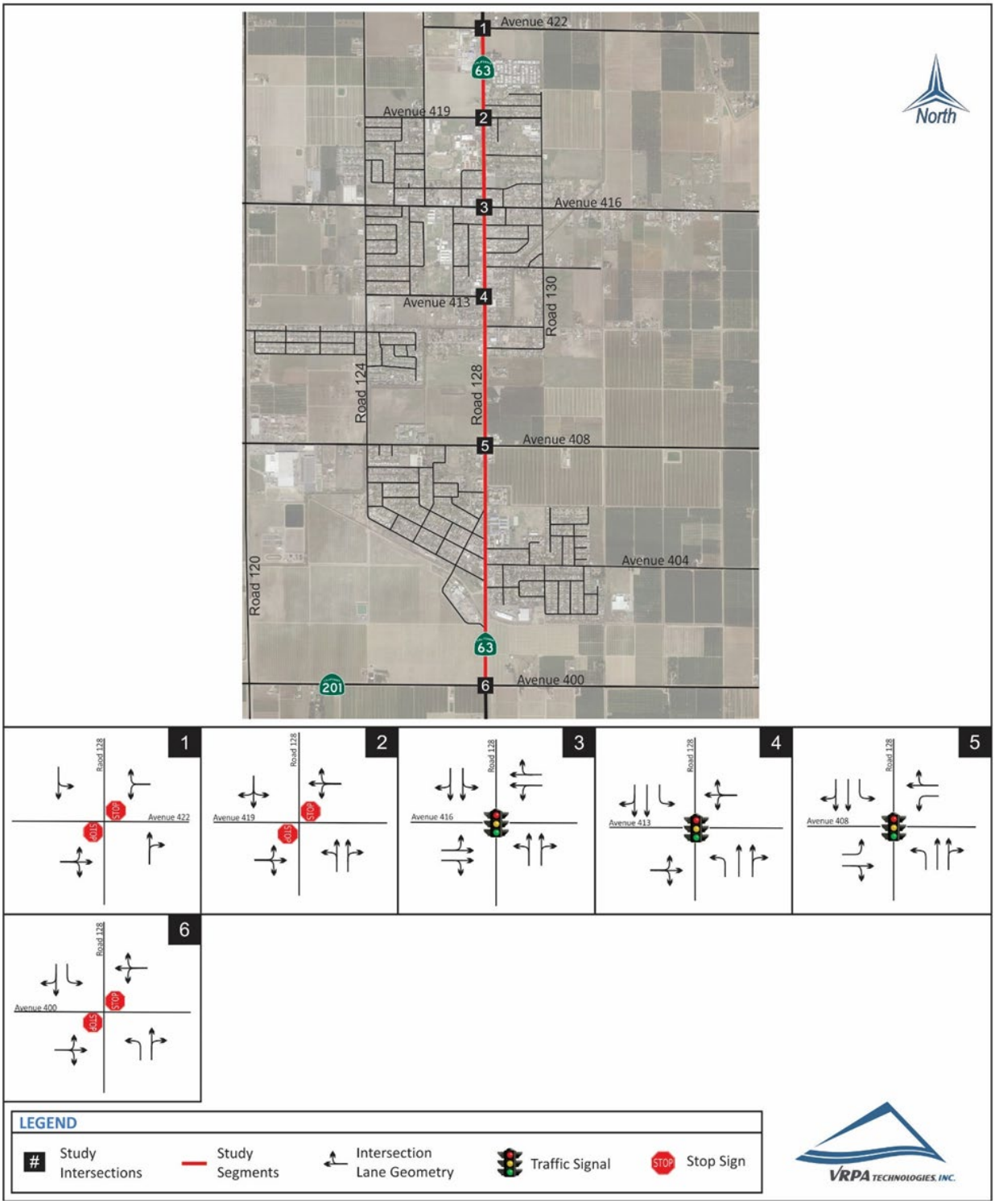


Figure 3.17-4
Existing AM Peak Hour Traffic

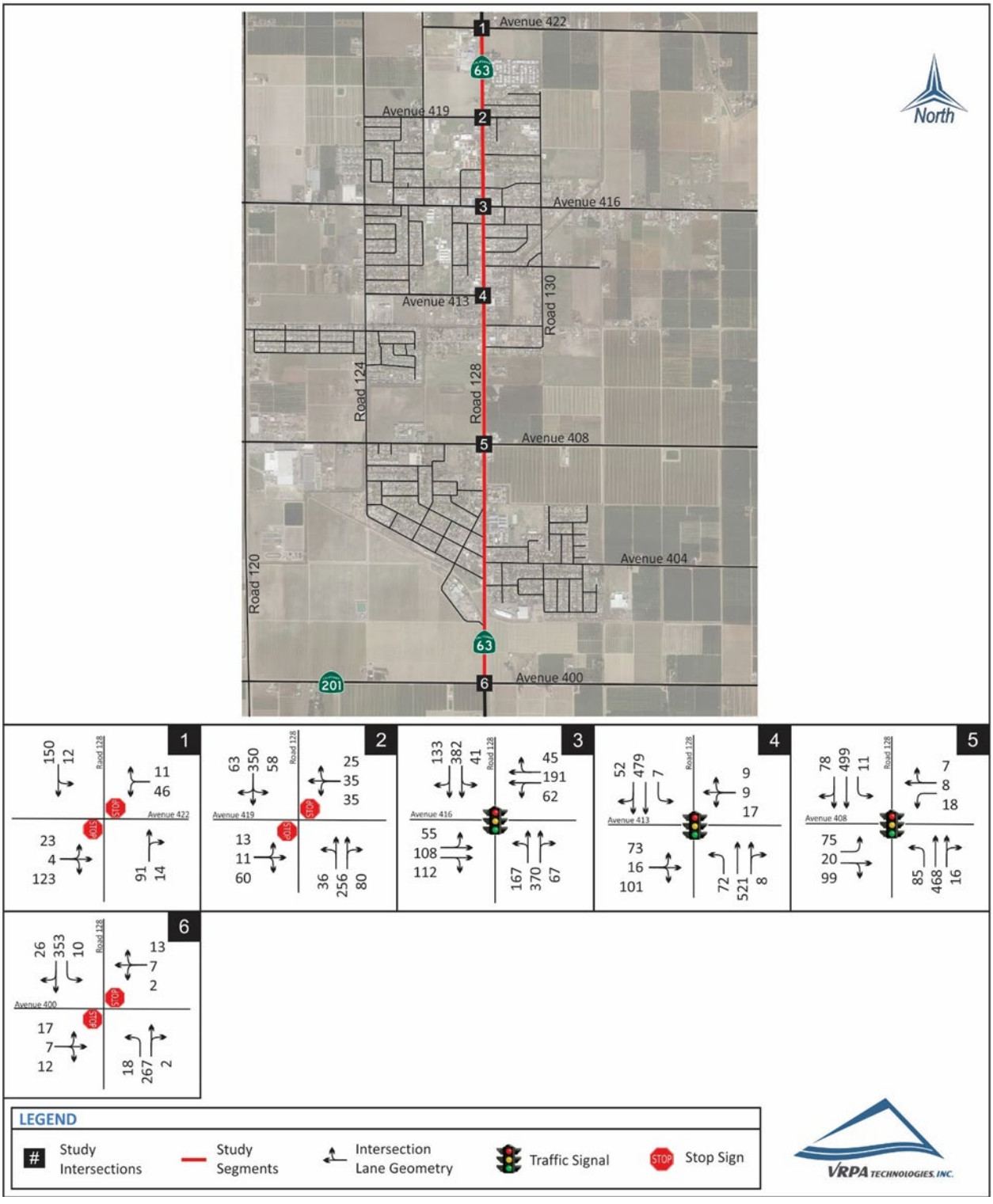
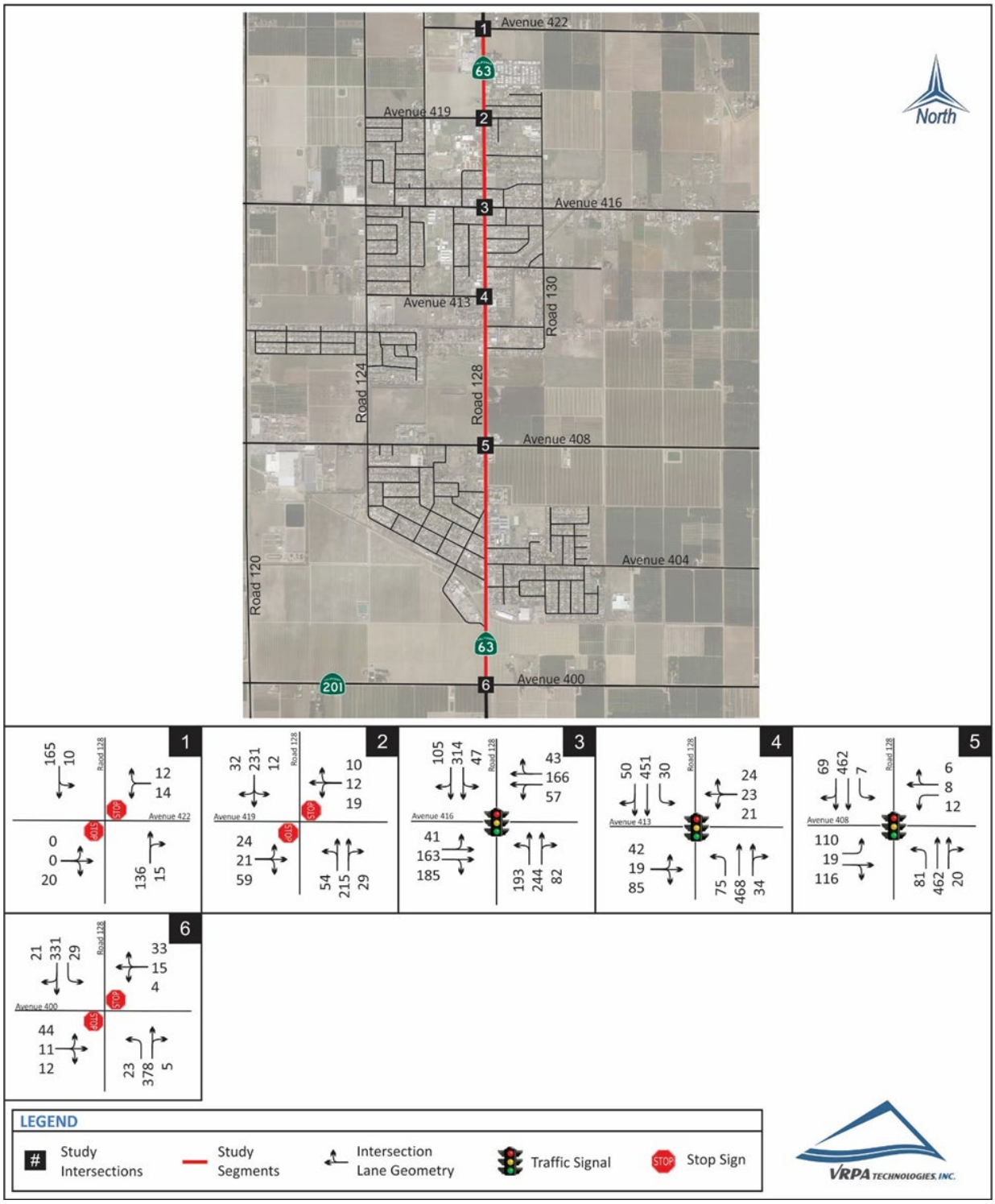


Figure 3.17-5
Existing PM Peak Hour Traffic



Affected Streets and Highways

"Major street and highway intersections and segments in the Cutler - Orosi Communities were analyzed to determine levels of service utilizing HCM-based methodologies described previously. The study intersections and street and highway segments included in this TIS are listed below.

Intersections

1. Road 128 (SR 63) at Avenue 422
2. Road 128 (SR 63) at Avenue 419
3. Road 128 (SR 63) at Avenue 416
4. Road 128 (SR 63) at Avenue 413
5. Road 128 (SR 63) at Avenue 408
6. Road 128 (SR 63) at Avenue 400 (SR 201)

Roadway Segments

1. Road 128 (SR 63) [from]:
   - Avenue 422 to Avenue 419
   - Avenue 419 to Avenue 416
   - Avenue 416 to Avenue 413
   - Avenue 413 to Avenue 408
   - Avenue 408 to Avenue 400 (SR 201)"[42]

Level of Service

Intersection Capacity Analysis

"All intersection LOS analyses were estimated using Synchro 10 Software. Various roadway geometrics, traffic volumes, and properties (peak hour factors, storage pocket length, etc.) were input into the Synchro 10 Software program in order to accurately determine the travel delay and LOS for each Study scenario. The intersection LOS and delays reported represent the 6th Edition HCM outputs.

Results of the analysis show that all of the study intersections are currently operating at acceptable levels of service. Table 2-1 [in the TIS, **Table 3.17-1** in this Draft EIR] shows the intersection LOS for the existing conditions. Synchro 10 (HCM 6th Edition) Worksheets are provided in Appendix C."[43]

Roadway Segment Capacity Analysis

[42] Op. Cit. 15.
[43] Op Cit.

"Results of the peak hour segment analysis along the existing street and highway system are reflected in Table 2-2 [in the TIS, **Table 3.17-2** in this Draft EIR]. Roadway segment analysis was based on the Florida Department of Transportation, Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas, which are commonly utilized in the Central Valley. Results of the analysis show that all of the study roadway segments are currently operating at acceptable levels of service."[44]

Queuing Analysis

"Table 2-3 [in the TIS, **Table 3.17-3** in this Draft EIR] provides a queue length summary for the study intersections for the Existing scenario. Traffic queue lengths at an intersection or along a roadway segment assist in the determination of a roadways overall performance. Excessive queuing at an intersection increases vehicle delay and reduces capacity. If a dedicated left turn lane doesn't provide adequate storage, vehicles will queue beyond the left turn storage pocket and into other travel lanes, thus increasing vehicle delay and reducing capacity. The queuing analysis is based upon methodology presented in Chapter 400 of Caltrans' Highway Design Manual (HDM). Appendix D includes Chapter 400 of Caltrans' HDM. The queue results shown in Table 2-3 [in the TIS, **Table 3.17-3** in this Draft EIR] represent the approximate queue lengths for the respective lane movements."[45]

[44] Op. Cit.
[45] Op. Cit.

Table 3.17-1
Existing Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING	
				DELAY	LOS
1. Road 128 / Avenue 422	Two-Way Stop Sign	C	AM	17.0	C
			PM	10.6	B
2. Road 128 / Avenue 419	Two-Way Stop Sign	C	AM	**> 300.0**	**F ***
			PM	17.5	C
3. Road 128 / Avenue 416	Signalized	C	AM	25.7	C
			PM	21.5	C
4. Road 128 / Avenue 413	Signalized	C	AM	14.5	B
			PM	12.9	B
5. Road 128 / Avenue 408	Signalized	C	AM	17.1	B
			PM	16.9	B
6. Road 128 / Avenue 400	Two-Way Stop Sign	C	AM	18.7	C
			PM	**27.7**	**D +**

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized controlled intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.

* Delay exceeds 300 seconds

+ The existing LOS is 'D' or worse. The minimum LOS shall reflect existing conditoins for future study scenarios.

Table 3.17-2
Existing Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	PEAK HOUR	EXISTING	
				VOLUME	LOS
1. Road 128 (SR 63)					
Avenue 422 to Avenue 419	2 Lanes Undivided	C	AM	765	B
			PM	524	B
Avenue 419 to Avenue 416	4 Lanes Undivided	C	AM	1026	C
			PM	794	C
Avenue 416 to Avenue 413	4 Lanes Undivided	C	AM	1160	C
			PM	1075	C
Avenue 413 to Avenue 408	4 Lanes Undivided	C	AM	1198	C
			PM	1134	C
Avenue 408 to Avenue 400	4 Lanes Undivided	C	AM	1185	C
			PM	1153	C
LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded					

Table 3.17-3
Existing Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING CONDITIONS	
			AM Queue	PM Queue
4. Road 128 / Avenue 413	NB Left	100	60	63
	SB Left	100	6	25
5. Road 128 / Avenue 408	NB Left	200	71	68
	SB Left	200	9	6
	EB Left	300	63	92
	WB Left	300	15	10
6. Road 128 / Avenue 400	NB Left	275	15	19
	SB Left	100	8	24
Queue is measured in feet / **BOLD** denotes exceedance				

Cutler-Orosi Community Collision Data

"The Transportation Injury Mapping System (TIMS) provided by University of California, Berkeley, was used to evaluate traffic collisions in the Cutler-Orosi Community along study segments. TIMS utilizes geocoded data provided by the Statewide Integrated Traffic Records System (SWITRS). SWITRS is a tool used by California Highway Patrol (CHP) and other Allied Agencies throughout California and includes various types of statistical reports and data. The database serves as a means to collect and process data gathered from a collision scene. Information from the TIMS database shows that approximately 97 injury or fatal accidents have occurred throughout the study area for the past 5 years. Table 2-4 [in the TIS, **Table 3.17-4** in this Draft EIR] a summary of the accidents reported in the Cutler-Orosi Community. Unsafe speed was the primary collision factor for 26.8% of the accidents reported. A graphical representation of traffic collisions throughout the Cutler-Orosi Community for the past 5 years is provided in Figure 2-4 [in the TIS, **Figure 3.17-6** in this Draft EIR]."[46]

Table 3.17-4
Cutler-Orosi Community Collision Data (2013-2017)

ACCIDENTS/FATALITIES/INJURIES	
Total Accidents	97
Fatal Accidents	2
Injury Accidents	95
Pedestrian/Bicycle Related Accidents	19
Persons Killed	2
Persons Injured	124
PRIMARY COLLUSION FACTOR	
Unsafe Speed	26.8%
Automobile Right of Way	25.8%
Under the Influence of Alcohol or Drug	14.4%
COLLISION TYPE (Top 3)	
Broadside	36.1%
Rear End	30.9%
Vehicle/Pedestrian	11.3%

Source: Transportation Injury Mapping System (TIMS) provided by University of California, Berkeley

Public Transit and Active Transport Systems

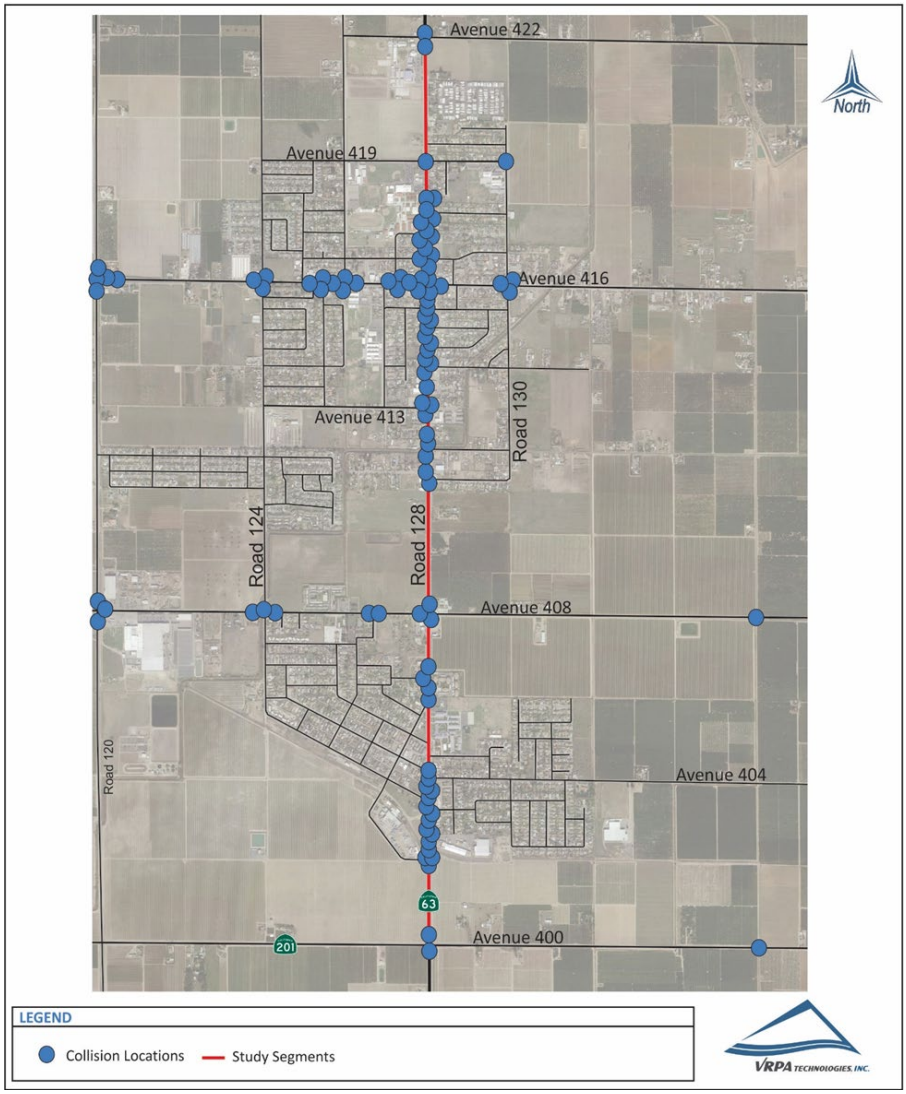
"While the private automobile is the dominant mode of travel within Cutler-Orosi, as it is throughout Tulare County, other modes of transportation are important. The latest available Census survey data for Cutler-Orosi indicates that about 57 percent of commuters drive alone to work, while 43 percent use other means: 29 percent carpool or vanpool, 4 percent walked, 0 percent used public transportation and 1 percent worked at home. The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips but tend

[46] Op. Cit. 19.

to be less concentrated in peak traffic periods. Off-peak trips also tend to have a greater proportion of shared ride and active (walk and bike) trips.

While congestion is not a major issue in Cutler-Orosi, overreliance on automobiles creates other costs for both society and households and means that many in the communities who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycling and walking. The public transit system alternatives for Cutler-Orosi include fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services."[47]

Figure 3.17-6
Cutler-Orosi Collision Data (2013-2017)



[47] Op. Cit.

Traffic Impacts and Circulation Analysis

After laying the foundation for its analysis (i.e., location, project roadways segments and intersections, methodology, etc.), the TIS provided the information necessary to make an informed decision regarding the Project's impact toward traffic/transportation. As noted in the TIS, "This chapter [Chapter 3 of the TIS] provides an assessment of the anticipated traffic as it relates to the Cutler-Orosi Community Land Use Plan (Figure 3-1 [in the TIS, **Figure 3.17-7** in this section of the Draft EIR]) and the impact of that traffic on the surrounding street system."[48]

Future Year Forecasts

"To assess the impacts that the Cutler-Orosi Community Land Use Plan may have on the surrounding street and highway segments and intersections, the first step is to evaluate the variation in future year traffic model growth and the historic population growth within the community. The levels of traffic expected in the year 2040 relate to the cumulative effect of traffic increases resulting from the implementation of the General/Community Plans of local agencies. Traffic forecasts in the Cutler-Orosi Community area for Future Year 2040 were provided by Tulare County Association of Government (TCAG) staff. TCAG manages public transportation, biking, streets, highways, air quality, rail, Measure R, congestion, and infrastructure plans & funding in Tulare County."[49]

Future Year 2040 No Build

"To project future traffic roadway conditions in the year 2040 considering the current Cutler-Orosi Community land use plan, a variety of sources were used. TCAG's Future Year 2040 model exhibited a growth rate of approximately 1.5% in the study area. Traffic projections in Caltrans' SR 63 and SR 210 Transportation Concept Report (TCR) displayed a growth rate of approximately 1.75% and 2.66% in the study area, respectively. Historical growth in the unincorporated portion of Tulare County is approximately 1.3% based on population trends as forecasted in the Tulare County General Plan 2030 Update. Cutler-Orosi census data shows that the population has not increased since the year 2010. A growth rate of 2.0% is consistent with the overall growth in the study area and was used to evaluate Future Year 2040 No Build conditions.

The Future Year 2040 No Build traffic, resulting from the process described above, is shown in Figures 3-2 and 3-3 [in the TIS, **Figures 3.17-8** and **3.17-9** in the Draft EIR]."[50]

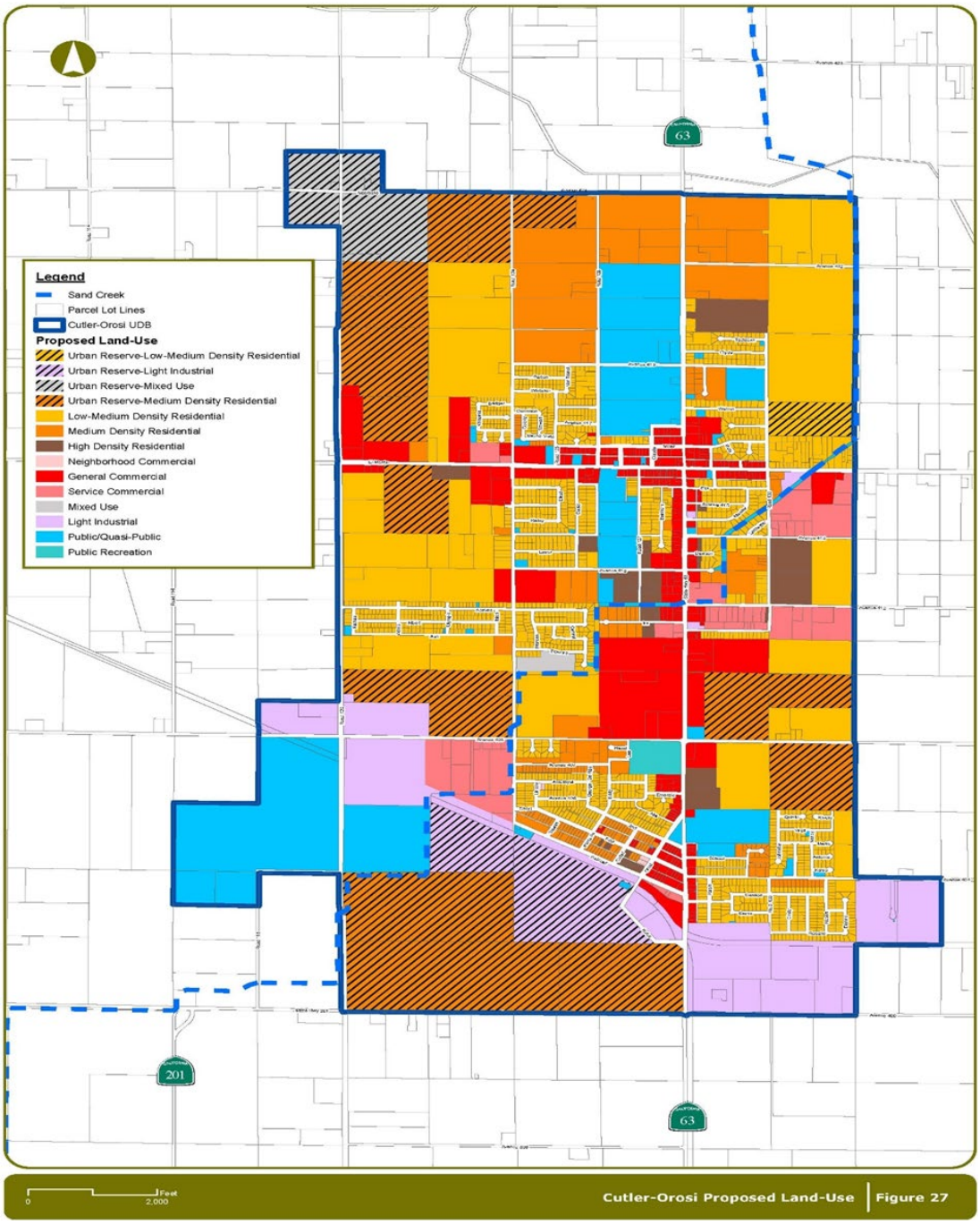
Future Year 2040 Plus Build

"The net area increase in the urban development boundary is 712.1 acres when comparing the proposed Urban Development boundary and the Existing boundary. While this represents a 30% increase in Urban Development boundary, historical growth in and around the Cutler-Orosi Community will primarily remain constant. A growth rate of 2.25% was used to estimate the overall growth in the study area considering the proposed Land Use for the Cutler-Orosi Community given the increase in the Urban

[48] Op. Cit. 24.
[49] Op. Cit.
[50] Op. Cit.

Development Boundary. The Future Year 2040 Build traffic, resulting from the process described above, is shown in Figures 3-4 and 3-5 [in the TIS, **Figures 3.17-10** and **3.17-11** in the Draft EIR]."[51]

Figure 3.17-7
Proposed Cutler-Orosi Land Use Plan Designations



[51] Op. Cit.

Figure 3.17-8
Future Year 2040 No Build AM Peak Hour Traffic

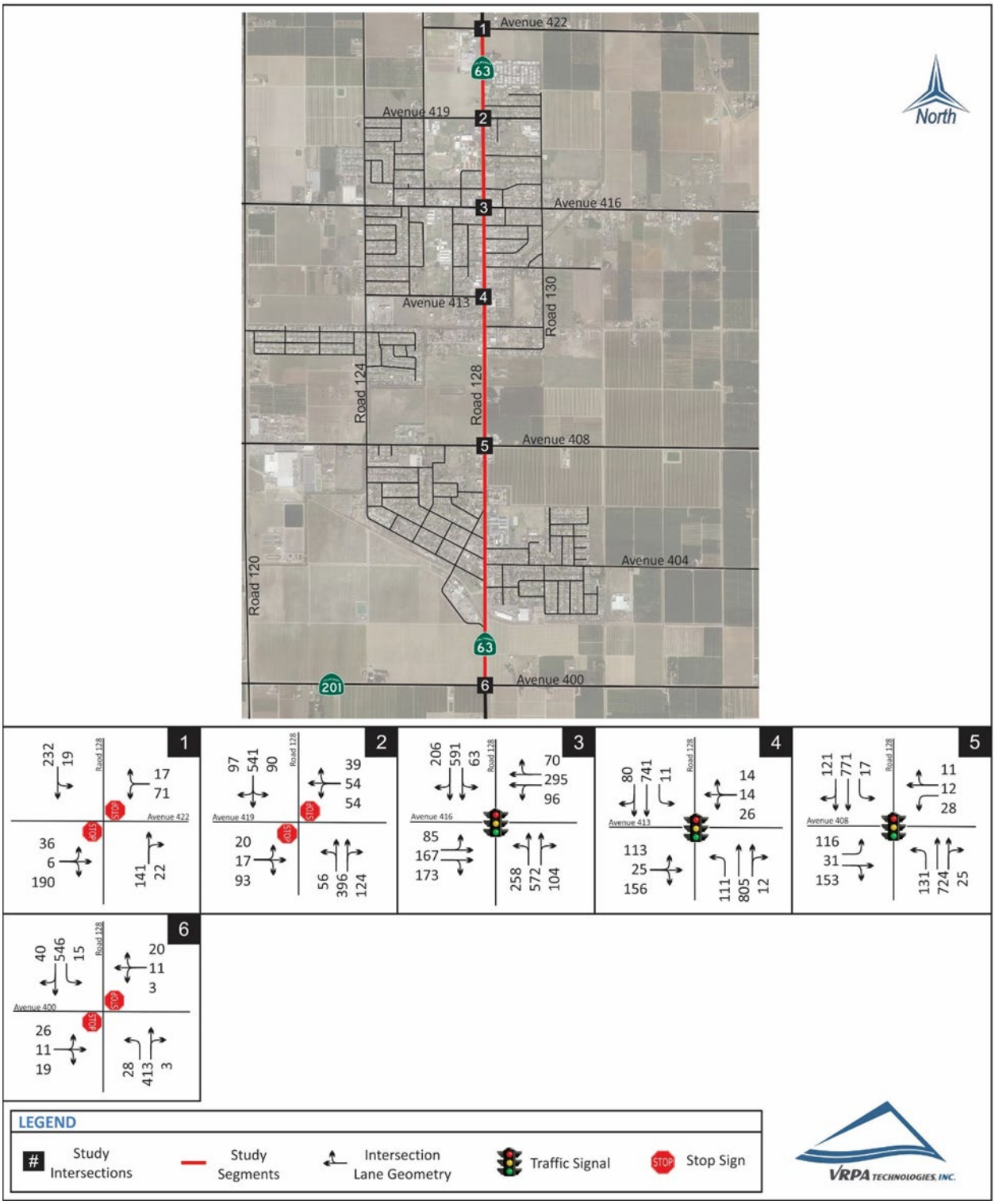


Figure 3.17-9
Future Year 2040 No Build PM Peak Hour Traffic

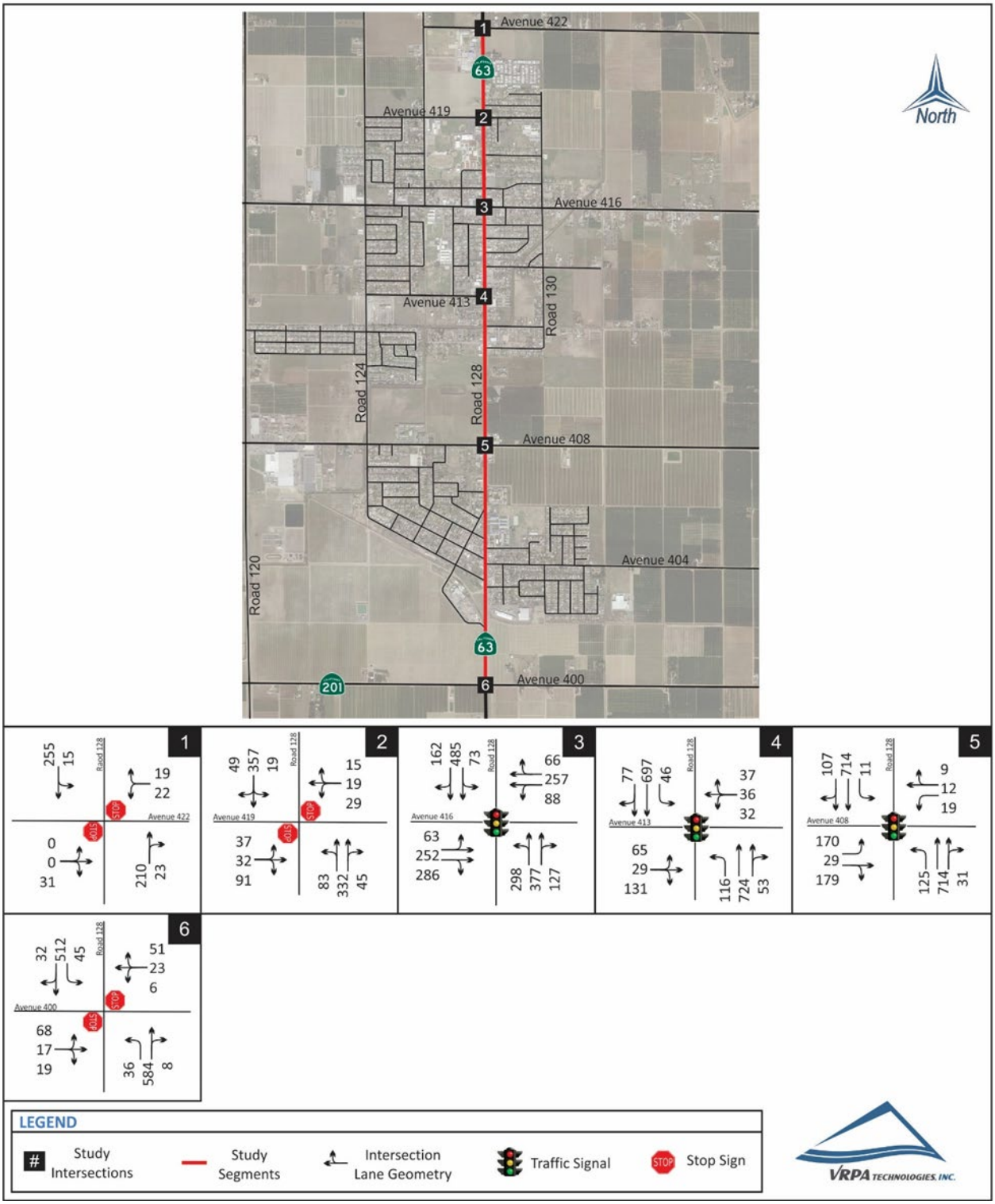


Figure 3.17-10
Future Year 2040 Plus Build AM Peak Hour Traffic

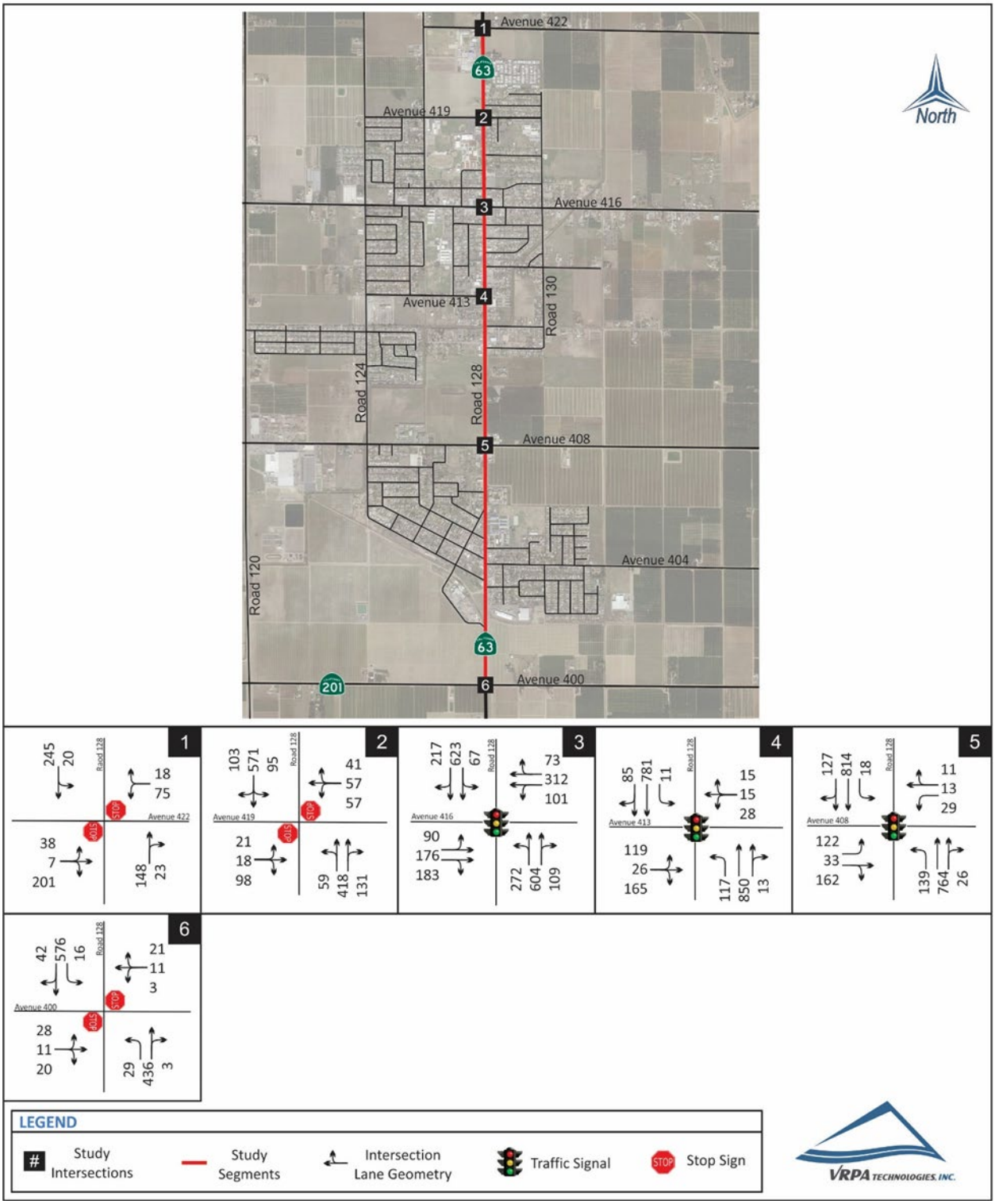
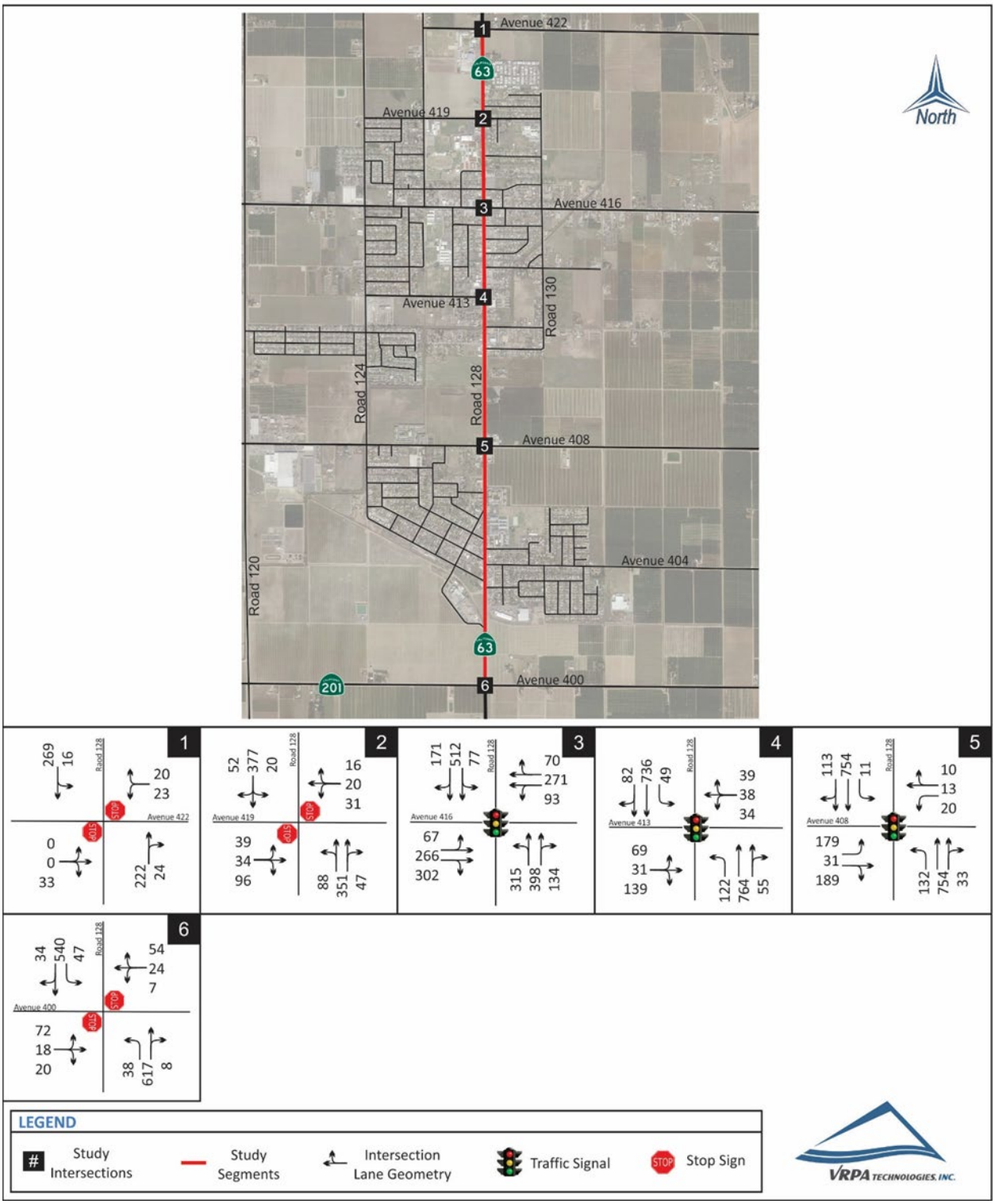


Figure 3.17-11
Future Year 2040 Plus Build PM Peak Hour Traffic



Impacts

Intersection Capacity Analysis

"Table 3-1 [in the TIS, **Table 3.17-5** in this Draft EIR] shows the anticipated level of service conditions at study intersections for the Future Year 2040 scenarios. Results of the analysis show that two (2) of the study intersections will exceed level of service standards under the Future Year 2040 No Build scenario and three (3) of the study intersections will exceed level of service standards under the Future Year 2040 Plus Build scenarios. The improvement projects listed in Section 4.0 will alleviate level of service deficiencies at study intersections for all Future Year 2040 scenarios." [52]

Table 3.17-5
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
				DELAY	LOS	DELAY	LOS
1. Road 128 / Avenue 422	Two-Way Stop Sign	C	AM	19.3	C	21.4	C
			PM	12.3	B	12.7	B
2. Road 128 / Avenue 419	Two-Way Stop Sign	C	AM	**>300.0 ***	**F ++**	**>300.0 ***	**F ++**
			PM	**38.5**	**E**	**48.8**	**E**
3. Road 128 / Avenue 416	Signalized	C	AM	29.9	C	**37.0**	**D**
			PM	23.8	C	25.9	C
4. Road 128 / Avenue 413	Signalized	C	AM	17.8	B	18.9	B
			PM	16.6	B	17.4	B
5. Road 128 / Avenue 408	Signalized	C	AM	20.8	C	22.3	C
			PM	20.8	C	22.1	C
6. Road 128 / Avenue 400	Two-Way Stop Sign	C	AM	**30.0**	**D**	**34.7**	**D**
			PM	**208.8**	**F ++**	**>300.0 ***	**F ++**
DELAY is measured in seconds							
LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded							
For signalized controlled intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.							
* Delay exceeds 300 seconds							
++ Meets Peak Hour Signal Warrant							

[52] Op. Cit.

Roadway Segment Capacity Analysis

"Table 3-2 [in the TIS, **Table 3.17-6** in this Draft EIR] shows the anticipated level of service conditions at study roadway segments for the Future Year 2040 scenarios. Results of the analysis show that all of the study roadway segments will meet the applicable level of service standards. As a result, no roadway segment improvements are warranted."[53]

Table 3.17-6
Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	PEAK HOUR	FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
				VOLUME	LOS	VOLUME	LOS
1. Road 128 (SR 63)							
Avenue 422 to Avenue 419	2 Lanes Undivided	C	AM	1183	C	1248	C
			PM	810	B	855	B
Avenue 419 to Avenue 416	4 Lanes Undivided	C	AM	1586	C	1674	C
			PM	1228	C	1295	C
Avenue 416 to Avenue 413	4 Lanes Undivided	C	AM	1793	C	1893	C
			PM	1662	C	1754	C
Avenue 413 to Avenue 408	4 Lanes Undivided	C	AM	1852	C	1955	C
			PM	1753	C	1850	C
Avenue 408 to Avenue 400	4 Lanes Undivided	C	AM	1832	C	1933	C
			PM	1783	C	1881	C
LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded							

Queuing Analysis

"Table 3-3 [in the TIS, **Table 3.17-7** in this Draft EIR] provides a queue length summary for the study intersections for the Future Year 2040 scenarios. The queuing analyses is based upon methodology presented in Chapter 400 of Caltrans' Highway Design Manual (HDM). Appendix C includes Chapter 400 of Caltrans' HDM. The queue results shown in Table 3-3 [in the TIS, **Table 3.17-7** in this Draft EIR] represent the approximate queue lengths for the respective lane movements."[54]

[53] Op. Cit.
[54] Op. Cit.

Table 3.17-7
Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
			AM Queue	PM Queue	AM Queue	PM Queue
4. Road 128 / Avenue 413	NB Left	100	93	97	98	**102**
	SB Left	100	9	38	9	41
5. Road 128 / Avenue 408	NB Left	200	109	104	116	110
	SB Left	200	14	9	15	9
	EB Left	300	97	142	102	149
	WB Left	300	23	16	24	17
6. Road 128 / Avenue 400	NB Left	275	23	30	24	32
	SB Left	100	13	38	13	39

Queue is measured in feet / **BOLD** denotes exceedance

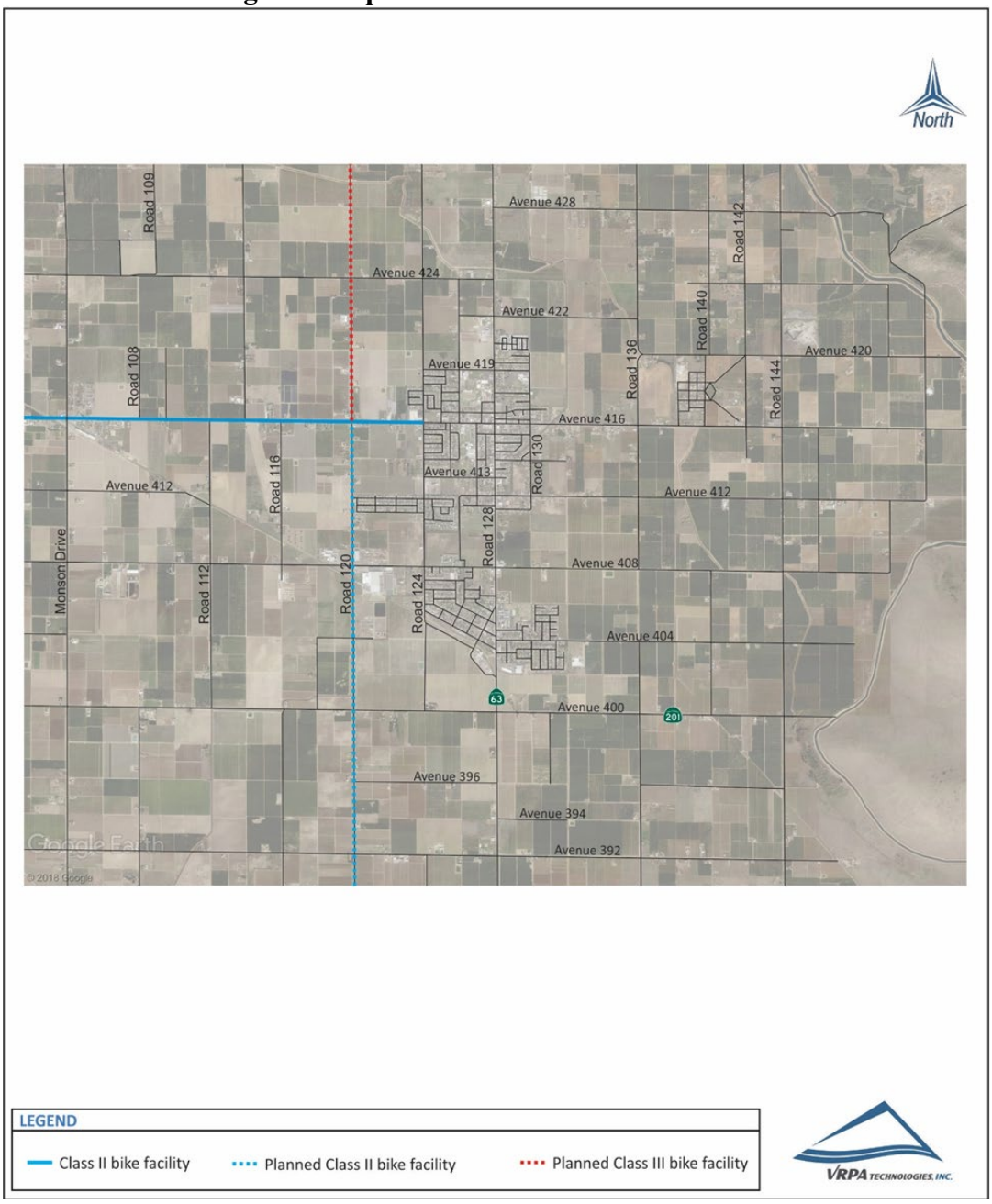
Public Transit, Bikeways, and Pedestrian Circulation

"As noted previously, the public transit system alternatives for Cutler-Orosi include fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services. Public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a relatively low-density community. Furthermore, the low level of auto congestion in Cutler-Orosi, now and into the future suggests that driving will continue to be more convenient than public transit for those with access to a private car. For those without access to a car, the best approach for improving transit in Cutler-Orosi will be to enhance rider information systems that give potential transit patrons precise arrival and departure times for transit and paratransit vehicles. Such real time information systems can both increase demand for public transit and paratransit and improve riders' overall experience.

With respect to pedestrian and bicycle modes, the current and projected low levels of vehicular traffic in Cutler-Orosi, together with short travel distances within the community, means that these modes can be very competitive for trips within Cutler-Orosi, even with minimal facilities. A reasonably flat, safe surface on the side of a low traffic road can often suffice for pedestrians and bicycles, especially if signs alert drivers to the presence of non-motorized traffic. Figure 3-6 [in the TIS, **Figure 3.17-12** in this Draft EIR] shows the existing and proposed bicycle facilities in the vicinity of the Cutler-Orosi community."[55]

[55] Op. Cit.

Figure 3.17-12
Existing and Proposed Bike Facilities – Cutler-Orosi Area



Based on the above analysis, it can reasonably be determined that the Project (a planned approach to anticipated growth in Goshen over time) will ultimately result in the need to complete various improvements to the traffic network (i.e., circulation system) to efficiently and efficient move vehicles, persons, and goods within and through the community. As indicated in the TIS, "The proposed Cutler-Orosi Community Plan Update traffic analysis provides a policy framework to address potential traffic impacts encountered in the planning process. Results of the traffic analysis shows that the Cutler-Orosi Community Plan Update is in harmony with both the Tulare County General Plan and the TCAG Regional Transportation Plan. The General Plan currently calls for all intersections and roadway segments to be maintained at LOS "D" or better; this objective would be obtained given implementation of the Community Plan and the specific roadway improvements noted below. The Cutler-Orosi Community Plan also meets Caltrans' acceptable level of service criteria in the study area with the development of specific roadway improvements noted below. As a result, the Cutler-Orosi Community Plan Update will not conflict with a program, plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Described below are recommended improvements at study area intersections and segments for the Future Year 2040 scenarios that address future transportation and circulation issues in the Cutler-Orosi community. The improvements are recommended to provide consistency with the Tulare County General Plan and they would result in acceptable levels of service as shown in Table 4-1 [in the TIS, **Table 3.17-8** in this Draft EIR]. As of January 2019 (with the incorporation of SB 743 into CEQA), deficiencies in the roadway system related to level of service and delay are no longer considered to be significant impacts under CEQA. Therefore, the improvements described below are recommendations but not CEQA mitigation measures."[56]

"Intersections

Future Year 2040 No Build Scenario

Road 128 / Avenue 419
- Install Traffic Signal

Road 128 / Avenue 400
- Install Traffic Signal

[56] Op. Cit. 34-35.

Future Year 2040 Build Scenario

Road 128 / Avenue 419
- See MM TR-1

Road 128 / Avenue 416
- Widen the westbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 left turn lane)

Road 128 / Avenue 400
- See MM TR-2"[57]

Table 3.17-8
Intersection Operations with Improvements

INTERSECTION	TARGET LOS	PEAK HOUR	CUMULATIVE YEAR 2040 NO BUILD		CUMULATIVE YEAR 2040 PLUS BUILD	
			DELAY	LOS	DELAY	LOS
2. Road 128 / Avenue 419	C	AM	7.0	A	7.5	A
		PM	5.8	A	6.0	A
3. Road 128 / Avenue 416	C	AM			29.9	C
		PM			31.9	C
6. Road 128 / Avenue 400	C	AM	8.8	A	8.9	A
		PM	10.9	B	11.3	B
DELAY is measured in seconds						
LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded						

Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Update would result in a less than significant impact. Tulare County RMA agrees with and supports this assessment and conclusion. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As such, the Project would result in a ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

[57] Op. Cit. 34-35.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

Similar to Project-Specific Impacts, the Project would result in a ***Less Than Significant Cumulative Impacts*** through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Project-specific and Cumulative impacts related to this Checklist Item will be ***Less Than Significant*** through the Year 2030 Planning horizon.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Project Impact Analysis: ***Less Than Significant Impact***

Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Update would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion.

"In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. Upon its incorporation into CEQA in 2019, this legislation changed the way that transportation studies are conducted for environmental documents. Delay-based metrics such as roadway capacity and level of service are no longer the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, the new performance measures is vehicle miles travelled (VMT).

July 1, 2020 was the statewide implementation date for SB 743. In August of 2020, Tulare County prepared SB 743 Guidelines and established a significance threshold for Community Plan Updates and other types of projects. The applicable significance threshold for Community Plan Updates is VMT/capita in the horizon year that exceeds VMT/capita for existing conditions. The analysis described in Chapter 5 [in the TIS] concludes that the project will not exceed this threshold."[58]

Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that

[58] Op. Cit. 35-36.

is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a result, the Project would result in a ***Less Than Significant Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR. There are no Congestion Management Programs in Tulare County or through the Tulare County Association of Governments. Therefore, there will be a ***Less Than Significant Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a result, the Project would result in a ***Less Than Significant Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Project Impact Analysis: ***Less Than Significant Impact***

"The existing roadway system has been designed in accordance with County of Tulare roadway standards to avoid roadway hazards and other traffic-related hazardous features. As future development occurs, Tulare County policies such as LU-7.3 Friendly Streets, TC-1.14 Roadway Facilities, and Tulare County General Plan Update (2030) compliance with AB 1358 which calls for four Complete Streets-related Principles including: Principle 1: County-wide Collaboration; Principle 2: Connectivity; Principle 3: Community Circulation; and Principle 4: Pedestrian and Bicycle Facilities, will be implemented. Further, as indicated in the TIS, "The Cutler-Orosi Community Plan Update would not result in hazards due to design features, since all proposed improvements would be built to County and Caltrans design standards. The proposed Community Plan land uses would not increase the use of farm equipment on streets and roads in the Cutler-Orosi Community. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or

dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is needed."[59]

Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Update would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a result, the Project would result in a ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, no design changes that would cause a hazard are proposed as part of the Project. There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a result, the Project would, within the planning horizon (Year 2030) of the Community Plan planning area.

Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Update would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a result, the Project would result in a ***Less Than Significant Cumulative Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

[59] Op. Cit. 36.

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

d) Result in inadequate emergency access?

Project Impact Analysis: ***Less Than Significant Impact***

As indicated in the TIS, The Cutler-Orosi Community Plan Update would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the study intersections and roadway segments will meet acceptable levels of service with the development of specific roadway improvements. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed.[60]

Based on the analysis contained in the TIS, qualified expert consultant VRPA determined that the proposed Update would result in a less than significant impact. Tulare County RMA agrees with and supports the assessment and conclusion. As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a such, the Project would result in a ***Less Than Significant Impact*** related to this Checklist Item through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As a result, the Project would result in a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

[60] Op. Cit.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur through the Year 2030 Planning horizon.

ACRONYMS AND ABBREVIATIONS

AB	Senate Bill (in California)
CALUP	Comprehensive Airport Land Use Plan
CEQA	California Environmental Quality Act
CHP	California Highway Patrol
CNG	Compressed Natural Gas
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
FAT	Fresno Air Terminal (aka, Fresno-Yosemite International Airport)
HCM	Highway Capacity Manual
LOS	Level Of Service
MOE	Measure of Effectiveness
MPO	Metropolitan Planning Organization
MUTCD	California Manual on Uniform Traffic Control Devices
RMA	Resource Management Agency
RTP	Regional Transportation Plan
SCS	Sustainable Communities Strategy
SWITRS	Statewide Integrated Traffic Records System
TCaT	Tulare County Transit Agency
TIMS	Transportation Injury Mapping System
UDB	Urban Development Boundary
VRPA	VRPA Technologies, Inc. (consultant)

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Section 15126.2(a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC .

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Tulare County Association of Governments (TCAG). 2018 Regional Transportation Plan. Action Element. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/action-element/

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Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Included in Appendix "F" of this Draft EIR.

Tulare County. Tulare County General Plan 2030 Update. August 2012. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

Tulare County General Plan 2030 Update. Background Report. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.

"Cutler-Orosi Community Plan Update Transportation Impact Study Report" prepared by consultant VRPA Technologies; Inc. Included in Appendix "E" of this document.

Tribal Cultural Resources
Chapter 3.18

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impact*** to Cultural Resources with mitigation through the Year 2030 Planning horizon. A California Historical Resources Information Systems (CHRIS) search, consultation with the California Native American Heritage Commission (including a Sacred Lands File (SLF) search), and Tribal Consultation pursuant to AB 52 (which are included in Appendix "C" of this DEIR) are used as the basis for this finding. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources. If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the Project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of "historical resources" is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources.[1] "Substantial adverse change" is defined as "physical demolition, destruction, relocation, or alteration of the resource…"[2]

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the Project site.[3] Provisions for the accidental discovery of historical or unique

[1] CEQA Guidelines Sections 15064.5. Accessed August 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC (at pdf page 158).
[2] Ibid. PDF pages 148-162.
[3] Op. Cit. PDF page 158.

archaeological resources encountered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."[4]

This section of the Draft Program/Project Environmental Impact Report (DEIR) for the Project meets CEQA requirements by addressing potential impacts to cultural resources on the proposed Project site. The "Environmental Setting" section provides a description of cultural resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" section provides a description of applicable State and local regulatory policies. Results of cultural resources reports from CHRIS are included. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant.

CEQA Thresholds of Significance

- Would the Project cause a substantial adverse change in the significance of a tribal cultural resource that is listed in a state or local register of historical resources
- Would the Project cause a substantial adverse change in the significance of a tribal cultural resource that has been determined by a local agency to be significant pursuant to criteria set forth in the Public Resources Code

ENVIRONMENTAL SETTING

Cutler and Orosi are two unincorporated communities located in northern Tulare County. Both communities are located along State Route 63 about one half mile apart. The population for Cutler and Orosi is 5,850 and 7,760 persons in 2017. Cutler and Orosi are surrounded by agricultural lands. The current Cutler-Orosi Urban Development Boundary (UDB) area consists of approximately 2,441.9 acres (see Figure 4 in Cutler-Orosi Community Plan Update). Cutler is bisected north and south by State Route (SR) 63. SR 63 and Avenue 416 divides Orosi into four neighborhood quadrants.[5]

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[6]

[4] California Legislative Information. PRC PUBLIC RESOURCES CODE – PRC DIVISION 5. PARKS AND MONUMENTS [5001 - 5873] CHAPTER 1.7. Archaeological, Paleontological, and Historical Sites [5097 - 5097.7]. Section 5097.5 Accessed August 2021 at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5097.5.

[5] Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Page 29.

[6] Tulare County General Plan 2030 Update. Page 8-5.

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."[7]

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167"[8]

Existing Cultural and Historic Resources

"Tulare County's known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources."[9]

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State University Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws.

Existing Resources

Records Search Results

A records search (that is, the California Historical Resources Information Systems (CHRIS)) of site files and maps was conducted at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. According to a CHRIS research completed in October 2018, there have been 17 previous cultural resource studies conducted within the project area. There were also two recorded cultural resource within project area and one recorded resource

[7] Ibid.
[8] Op. Cit. Page 8-6.
[9] Tulare County General Plan 2030 Update. Background Report. Page 9-56.

within the one-half mile radius. These resources consist of two historic era buildings and one historic era canal.

Orosi Branch Library (resource P-54-004004), located at 12662 Avenue 416, has been given a National Register status code of 1S, indicating the individual property has been listed in the National Register of Historic Places by the keeper. It is also listed in the California Register of Historical Resources. There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. Results of the CHRIS are included in Appendix "C" of this Draft EIR.

As there are no development plans or proposal that would impact these resources during the Update process, it is unlikely that any these resources would be impacted by adoption of the Community Plan. Any future developments would be evaluated on a case-by-case basis specific to the site where a proposal may occur to ensure appropriate minimization, avoidance, or mitigation may be necessary.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on October 9, 2018, in order to determine whether Native American sacred sites have been identified either within or in close proximity to the study area. The NAHC responded in a letter dated October 18, 2018, stating that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the project study area. The NAHC notes that the absence of surface visible archaeological features does not preclude their presence below surface. The NAHC advised that when specific projects become public, that the County or appropriate jurisdiction inform the Native American contacts provided by the NAHC as to the nature of the proposed project. As part of the consultation process, the NAHC recommends that local government and project developers contact tribal governments and Native American individuals on the list provided in order to determine of the proposed action might impact any cultural places or sacred sites. NAHC also recommends that more than one written notice sent to tribes that are traditionally and culturally affiliated to a potential area of project affect (APE) during the 30-day notification period to ensure that the information has been received.

Letters and follow-up phone calls were made to tribal organizations on the NAHC contact list, to determine whether tribal cultural resources were known in or near the Project. These investigations determined that the Project area had not been previously surveyed and that no sites or tribal cultural resources were known to exist within or near it.

Planning Department Records Search

It is also noted that Planning Department records search of building permits and other types of entitlements within the Planning Area by RMA staff indicates that no new projects (i.e., construction-related developments which involves new structures or any clearing or earthmoving)

have occurred since the CHRIS was conducted by the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. As such, the landscape remains unchanged since the CHRIS was completed; that is, no surface or subsurface ground disturbances, demolition, or other physical changes within the Planning Area have occurred thus it is unlikely than any cultural resources have been impacted since the CHRIS was completed.

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

"With passage of the National Historic Preservation Act (NHPA) in 1966, the federal government embarked on a new era of leadership in the preservation of our nation's historic properties.

The NHPA established a partnership between the federal government and state, tribal, and local governments that is supported by federal funding for preservation activities. The National Park Service provides matching grants-in-aid from the Historic Preservation Fund to State Historic Preservation Officers, Tribal Historic Preservation Officers, and local governments certified as having qualified preservation programs. The NHPA also created the ACHP, the first and only federal agency created solely to address historic preservation issues.

The NHPA established a framework to foster a new ethic through all levels and agencies of the federal government. Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic properties and provide the ACHP with an opportunity to comment on projects before implementation. Because of Section 106, agencies have to assume responsibility for the consequences of their actions on historic properties and be publicly accountable for their decisions. Section 110 calls on all federal agencies to establish preservation programs and designate Federal Preservation Officers to coordinate their historic preservation activities."[10]

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.[11]

[10] Advisory Council on Historic Preservation. 2021. National Historic Preservation Act. Accessed August 2021 at: https://www.achp.gov/digital-library-section-106-landing/national-historic-preservation-act

[11] Advisory Council on Historic Preservation. 2014. State Historic Preservation Officers. Accessed August 2021 at: http://www.achp.gov/shpo.html

Among OHP's responsibilities are identifying, evaluating, and registering historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.[12]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.[13]

Tribal Consultation Requirements: SB 18 (Burton, 2004)

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting

Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.[14]

Tribal Consultation Requirements: AB 52 (Gatto, 2014)

[12] California Office of Historic Preservation. 2021.Mission and Responsibilities. Accessed August 2021 at: http://ohp.parks.ca.gov/?page_id=1066
[13] California Office of Historic Preservation. 2021. California Register of Historical Places. Accessed August 2021 at: http://www.ohp.parks.ca.gov/?page_id=21238
[14] California Legislative Information. 2021. Bill Number: SB 18. Accessed August 2021 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200320040SB18

The Public Resources Code has established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. (Pub. Resources Code, § 21080.3.1.) If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact."[15]

California Native American Heritage Commission (NAHC)

"In 1976, the California State Government passed AB 4239, establishing the NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. Up until this point, there had been little government participation in the protection of California's cultural resources. As such, one of the NAHC's primary duties, as stated in AB 4239, was to prevent irreparable damage to designated sacred sites, as well as to prevent interference with the expression of Native American religion in California."[16]

"Today, the NAHC provides protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction. It also provides a legal means by which Native American descendants can make known their concerns regarding the need for sensitive treatment and disposition of Native American burials, skeletal remains, and items associated with Native American burials."[17]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below. [18]

(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

[15] Governor's Office of Planning and Research. 2017. Technical Advisory. Page 4. AB 52 and Tribal Cultural Resources in CEQA. Accessed August 2021 at: https://opr.ca.gov/docs/20200224-AB_52_Technical_Advisory_Feb_2020.pdf

[16] California Native American Heritage Commission (NAHC). About the Native American Heritage Commission. Accessed August 2021 at: http://nahc.ca.gov/about/

[17] Ibid.

[18] California Natural Resources Agency. 2015. 15064.5. Determining the Significance of Impacts to Archeological and Historical Resources, Section 15064.5(c). Accessed August 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:[19]

ERM-6.1 Evaluation of Cultural and Archaeological Resources - The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

[19] Tulare County, 2012. Tulare County General Plan 2060 Update. Pages 8-18 to 8-19 Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

ERM-6.2 Protection of Resources with Potential State or Federal Designations - The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.8 Solicit Input from Local Native Americans - The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

ERM-6.9 Confidentiality of Archaeological Sites - The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

ERM-6.10 Grading Cultural Resources Sites - The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

IMPACT EVALUATION

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. According to the draft Plan Update, land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

The Southern San Joaquin Valley Information Center, Bakersfield (Center) conducted a cultural resources record search. The Center records search in October 2018 identified two cultural resources within the project area, and one recorded resource within one-half mile radius. Seventeen previous cultural resource studies have been completed within portions of the project area; and no additional studies have been completed within one-half mile radius. The records search included results of known and recorded cultural resources sites, inventory and excavation reports filed with Southern San Joaquin Valley Information Center, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest.

In their search results letter, Center staff noted, "We understand this project consists of a General Plan Update for the Cutler-Orosi Community. Further, we understand no immediate ground disturbance will take place as a result of this update. Therefore, no further cultural resource investigation is recommended at this time. However, prior to any future ground disturbance project activities, we recommend a new record search be conducted so our office can then make project specific recommendations for further cultural resources study, if needed. A list of qualified consultants can be found at www.chrisinfo.org." The Center staff also recommend that RMA contact the Native American Heritage Commission in Sacramento as, "They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required."

As noted earlier, the Native American Heritage Commission (NAHC) was contacted on October 9, 2018. In a response letter dated October 18, 2021 (see Appendix "C"), the NAHC indicated that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the Project area.

As indicated in here and in Chapter 3.5 Cultural Resources, the proposed Plan Update will result in a less than significant impact within the Year 2030 Planning horizon. However, as

development occurs, it is possible to encounter previously unknown cultural, historical, or archaeological resources. Based upon this uncertainty, implementation of **Mitigation Measures 3.5-1** and **3.5-3** would reduce potential Project-specific impacts related to this Checklist Item to a level considered ***Less Than Significant*** through the Year 2030 planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is in the foothill region of Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project would be mitigated to a level considered less than significant, cumulative impacts would also be considered ***Less Than Significant With Mitigation*** through the Year 2030 Planning horizon.

Mitigation Measure(s):

3.18-1 In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.

3.18-3 In Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken**:**

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and
    b. If the coroner determines the remains to be Native American:

i. The coroner shall contact the Native American Heritage Commission within 24 hours.
ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
   a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
   b. The descendant fails to make a recommendation; or
   c. The landowner or his authorized representative rejects the recommendation of the descendent.

Therefore, as noted earlier, in the unlikely event that Tribal Resource are discovered, implementation of **Mitigation Measures 3.18-1 and 3.18-3** would result in ***Less Than Significant Project-specific With Mitigation*** through the Year 2030 Planning horizon.

Conclusion: ***Less Than Significant Impact***

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

See earlier discussion at Item a).

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

See earlier discussion at Item a).

Mitigation Measure(s): ***See Mitigation Measures 3.18-1 and 3.18-3***

See earlier discussion at Item a).

Conclusion: ***Less Than Significant Impact With Mitigation***

See earlier discussion at Item a).

DEFINITIONS/ACRONYMS

Definitions

Historical Resources - See earlier discussion at "CEQA Guidelines: Archaeological Resources," Page 3.18-7.

Significant Resource – The California Public Resources Code identifies a resource as "significant" when it meets all of the following criteria:

"(c) A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history."[20]

(g) A resource identified as significant in an historical resource survey may be listed in the California Register if the survey meets all of the following criteria:

(1) The survey has been or will be included in the State Historic Resources Inventory.

(2) The survey and the survey documentation were prepared in accordance with office procedures and requirements.

(3) The resource is evaluated and determined by the office to have a significance rating of Category 1 to 5 on DPR Form 523.

[20] California Legislative Information. 2021. Public Resources Code – PRC. DIVISION 5. PARKS AND MONUMENTS [5001 - 5873] 5024.1. Accessed August 2021 at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5024.1 CHAPTER 1. State Parks and Monuments [5001 - 5077.8].

(4) If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource."[21]

Acronyms

AB	Assembly Bill (in California)
APE	Area of potential effect
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information Systems
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
NAHC	Native American Heritage Commission (of the State of California)
NHPA	National Historic Preservation Act
OHP	Office of Historic Preservation
PRC	Public Resources Code (of the State of California)
RMA	Tulare County Resource Management Agency
SHPO	State Historic Preservation Officer
SB	Senate Bill (in California)
SR	State Route
SLF	Sacred Lands File
UDB	Urban Development Boundary

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[21] Ibid.

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Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Included in Appendix "F of this Draft EIR.

Tulare County. Tulare County General Plan 2030 Update. August 2012. Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

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Utilities and Service Systems
Chapter 3.19

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in a ***Less Than Significant Impact*** to Utilities and Service Systems through the Year 2030 Planning horizon. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Utilities and Service Systems. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to

hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Utilities and Service Systems setting in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Increase wastewater beyond existing treatment capacity per the RWQCB;
- Result in the need for waste water infrastructure that would cause impacts;
- Result in the need for waste water infrastructure that would cause impacts;
- Result in the need for water supplies or entitlements;
- Result in the determination by the wastewater provider that it has adequate capacity;
- Served by a landfill with sufficient permitted capacity to Project's needs; or
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

ENVIRONMENTAL SETTING

Domestic Water and Wastewater

"In May 3, 2006, by Resolution 06-021, Tulare County Local Agency Formation Commission (LAFCO) adopted the Cutler Public Utility District (CPUD) and Orosi Public Utility District (OPUD) Municipal Service Review (MSR). The agencies in Tulare County were divided into three (3) categories: agencies subject to a full comprehensive study; agencies subject to a questionnaire study; and agencies exempt from a MSR study. The Cutler Public Utility District (CPUD) and Orosi Public Utility District (OPUD) was subject to a full comprehensive study.

The Orosi Public Utility District (OPUD) and the Cutler Public Utility District (CPUD) provide domestic water to the residents of the unincorporated communities of Orosi and Cutler, respectively. Each district relies solely on groundwater to meet the water demands of its customers. OPUD presently utilizes four wells and CPUD utilizes two active wells.

Currently, each district has sufficient water supply to meet existing water demands"[2]

[1] CEQA Guidelines. Section 15126.2 (a)
[2] Draft Cutler-Orosi Community Plan 2021 Update. Page 71.

Cutler Public Utility District (CPUD)

"CPUD has a total of four developed wells. Two of the wells are active and two of the wells are inactive at this time (see Figure 14 [in the Plan Update, **Figure 3.19-1** in this Draft EIR]). The two inactive wells (Well Nos. 3 and 4) were taken out of service because water test results exceeded the Maximum Contaminant Level (MCL) limit of nitrates. Well Nos. 5 and 6 are the two active wells that supply water for the community.

There is a well within CPUD (Well No. 7) that is not owned by CPUD. The well is owned by the Tulare County Redevelopment Agency and is used for fire flow at a local industry. Well No. 8 was completed in April 2006. Water quality testing; however, has revealed high nitrate concentrations approaching the MCL. Future use of Wells No. 8 is uncertain. Well No. 9 was drilled on the site for a proposed blending tank facility for CPUD. The well facility, when completed, will allow for water from Well Nos. 3 and 4 to be used in combination with flows from Well No. 5 and Well No. 9. The availability of sufficient quantities of low nitrate concentration water from CPUD's wells is uncertain.

The CPUD utilizes one elevated water storage tank for water system storage and pressure. The tank holds 50,000 gallons. The tank is connected to the distribution system by a common fill inlet and outlet configuration.

The CPUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of 2,930 GPM, or 4.22 MGD.

The CPUD water system (see Table 23 [in the Plan Update, **Table 3.19-1** in this Draft EIR]) supports 1,032 total connections including three industry-packing houses, and one box plant. Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is concluded that the District's water system is currently operating at or near its capacity, and cannot support additional connections at this time.

Table 3.19-1
Description of Existing Infrastructure

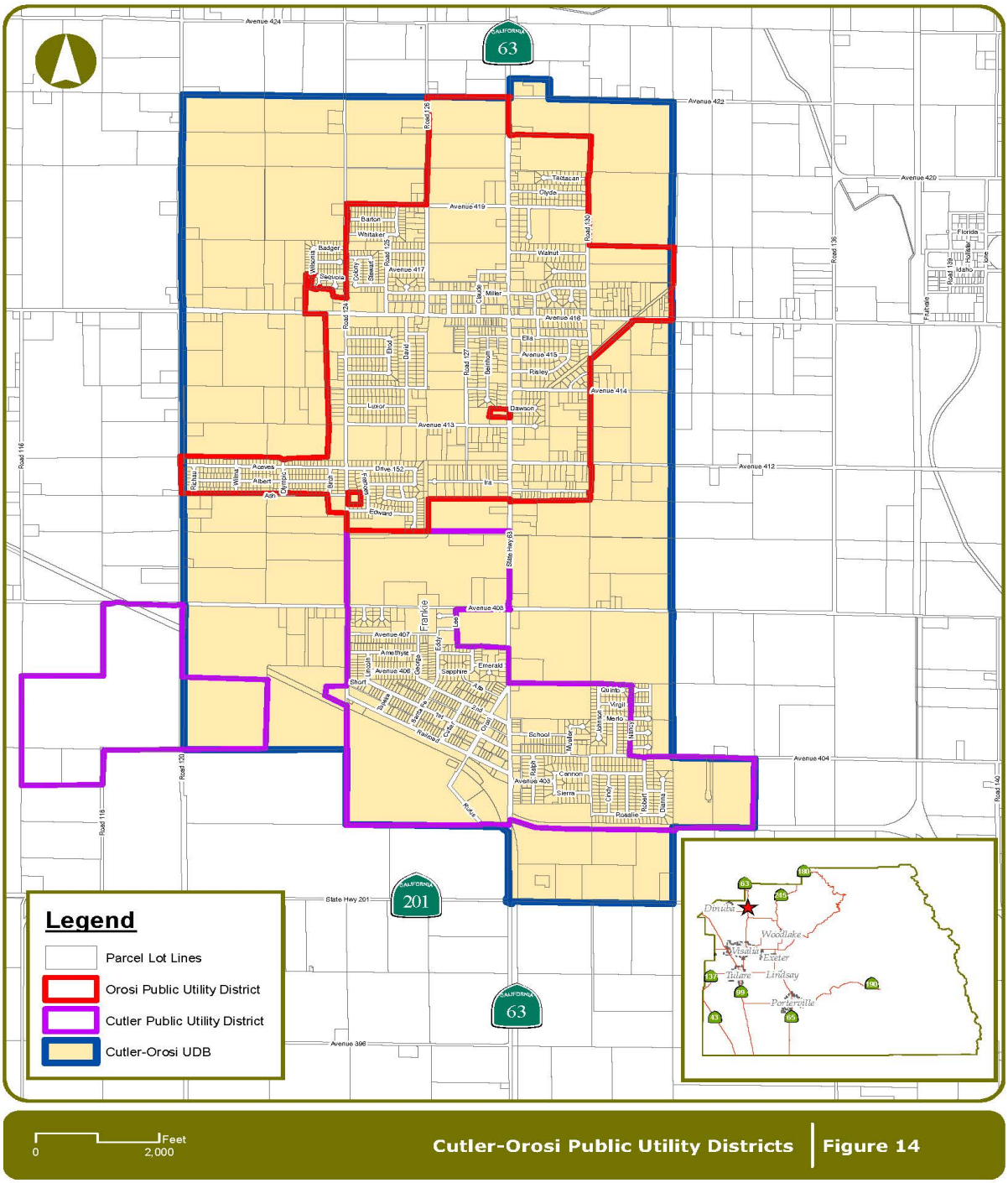
Community	Drinking Water			Waste Water*		
	No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
Cutler	1,032	1,032	0	1,255	1,255	0
Orosi	1,788	3,788	2,000	2,162	2,162	0

Source: Tulare County Housing Element Action Program 9, Data current as of May 2012

The amount of developable land available, including the availability of infrastructure, are two factors that have limited community growth from occurring, including affordable housing objectives, and commercial enterprise.

Currently, the District charges a flat rate for water service in the community. The District should consider installing water meters on all connections to their water system.

Figure 3.19-1
Inventory of Water Service in Cutler and Orosi PUDs[3]



[3] Ibid. 74.

Lovell High School, which is operated by the Cutler-Orosi Joint Unified School District, has requested water capacity from the Cutler PUD. The PUD plans to provide the school with water service pending the approval and implementation of the blending tank project. The school is located at the northwest quadrant of Avenue 392 and State Route 63, which is currently outside of the Cutler PUD boundary and sphere of influence (SOI). It is anticipated that the PUD would provide water service to the school on a contractual basis."[4]

Orosi Public Utility District (OPUD)

"The Orosi PUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of approximately 2,930 GPM, or 4.22 MGD. The District also has a water storage tank with a capacity of approximately 750,000 gallons (see Table 23 [in the Plan Update, **Table 3.19-1** in this Draft EIR]).

OPUD has a total of six developed wells. Four of the wells are active and two of the wells are inactive at this time. Well No. 6 is inactive and was taken out of service because water test results exceeded the MCL limit for nitrates. Well No. 9 is also considered inactive due to high nitrates and is not connected to the system because of a development dispute. Wells Nos. 4, 5A, 7, and 8 are the four active wells that supply water for the community.

OPUD has one ground level water storage tank and four hydropneumatic tanks that also provide some limited water storage. The ground level tank has a capacity of 750,000 gallons and delivers water to the system through two booster pumps located at the site of Well No. 5A. There is a 10,000 gallon hydropneumatic tank at each of the active wells. OPUD's water supply and distribution system is shown on Figure 2-3 [in the Water Supply Study 2007].

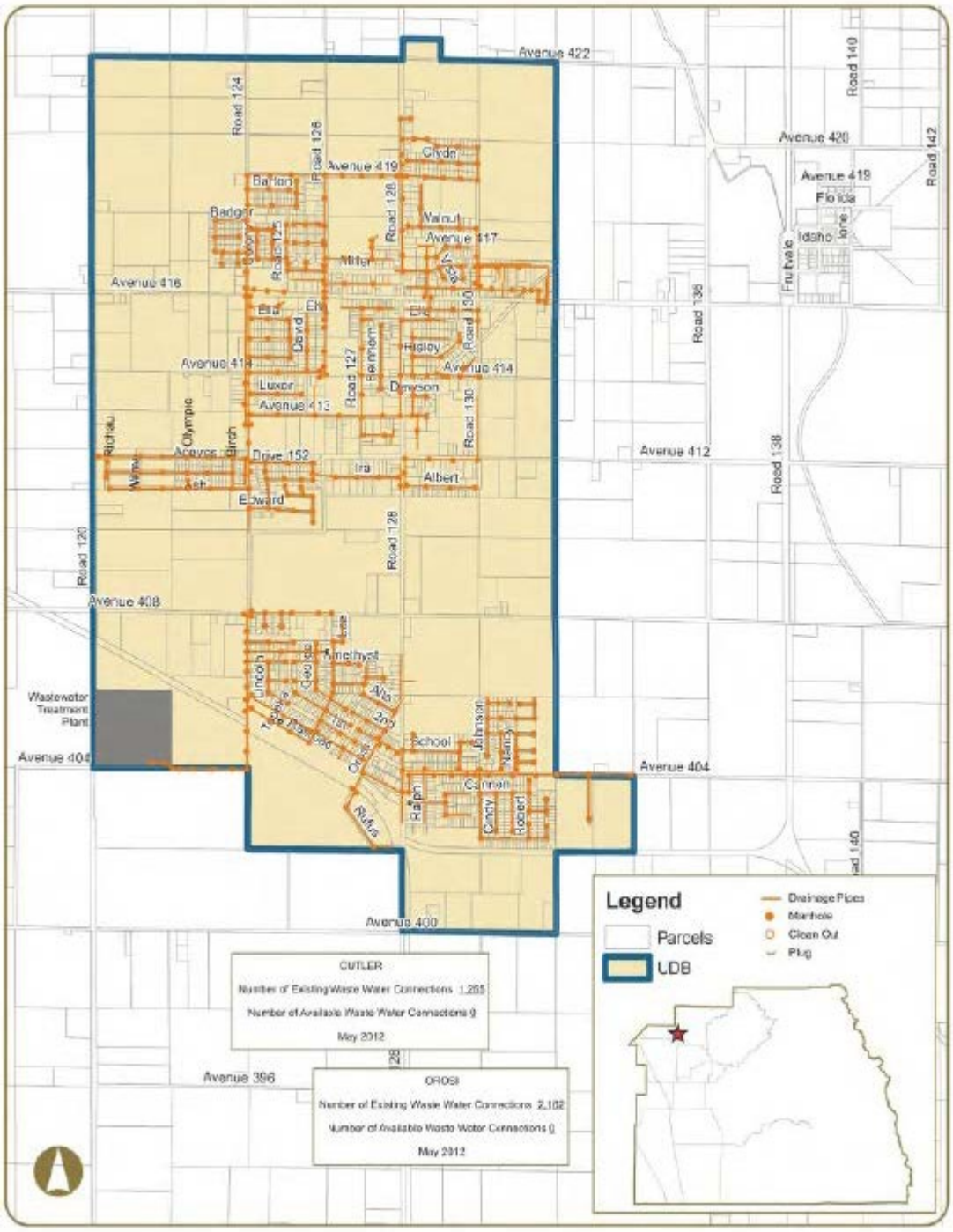
The Orosi PUD water system supports 1,788 total connections to their water system including 1,639 residential connections, 132 commercial connections, 3 agricultural connections, and 14 connections, which are inactive."[5]

Sanitary Sewer

"In March 1980, the Cutler Public Utility District entered into the Joint Wastewater Treatment and Disposal Facilities Agreement with the Orosi Public Utility District, forming the Cutler-Orosi Joint Power Wastewater Authority for the purpose of operating a wastewater treatment and disposal facility. Under the terms of the Agreement, which expires July 1, 2022, the Cutler Public Utility District owns 50 percent of the property and 40 percent of the plant and equipment of Authority. The Orosi Public Utility District owns 50 percent of the property and 60 percent of the plant and equipment of the Authority. [**Figure 3.19-2** in this Draft EIR]

[4] Op. Cit. 72.
[5] Op. Cit. 73

Figure 3.19-2
Inventory of Sewer Service for Cutler-Orosi[6]



[6] Ibid. Figure 15. 76.

Figure 15 [in the Plan Update, **Figure 3.19-2** in this Draft EIR] "graphically displays the approximate location of the sewer system and wastewater treatment plant. The Cutler PUD is currently allocated 1,255 equivalent dwelling units of capacity at the Cutler-Orosi Wastewater Treatment Facility (WWTF). The Orosi PUD is currently allocated 2,162 equivalent dwelling units of capacity at the WWTF. The Cuter and Orosi PUDs are currently under a building moratorium, and have waiting lists for additional sewer connections.

According to Cutler and Orosi PUD staff, the sanitary sewer collection system is very old and pipe leaks and breaks cause significant problems including groundwater inflow/infiltration and cross contamination with groundwater. The Orosi PUD is implementing a phased sewer collection system rehabilitation/replacement project, and has awarded a contract for the construction of the phase 1 improvements.

Treatment and disposal of the collected effluent is provided at the Cutler-Orosi WWTF, jointly owned and operated by the Cutler PUD and Orosi PUD. The Cutler-Orosi WWTF serves the communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana. It operates under the provisions of Waste Discharge Requirements (WDR) Order No. 97-106, issued by the California Regional Water Quality Control Board (RWQCB). The average dry weather flow at the WWTF is approximately 1.40 MGD, with a historical high flow of 1.89 MGD. Flow at the WWTF is greater during winter months than in summer months due to inflow/infiltration of storm water into the collection system during winter months, and ex-filtration during dry summer months. The PUDs will be able to more accurately predict the remaining capacity at the WWTF once repairs are made to leaking pipes throughout the collection system.

The Cutler PUD and Orosi PUD are working with Tulare County to secure funding that will be used to correct deficiencies that would increase the capacity of the WWTF. Proposed improvements will modernize the facility and add capacity to bring the serviceable operational limits to 2.4 MGD."[7]

Storm Drainage

"A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drainpipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

[7] Draft Cutler-Orosi Community Plan 2021 Update. Page 75.

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 24 [in the Plan Update] identifies the location of drainage inlets and sumps in Cutler-Orosi."[8]

Solid Waste

"Solid waste disposal services for the Community of Cutler-Orosi is provided by Pena's Disposal, a private company. Solid waste generated in Cutler-Orosi can be disposed of at the Visalia Landfill, located at 22466 Road 80, Visalia, California)."[9]

The Tulare County Solid Waste Department (communitcation with Mr. Scott Pfanstiel, retired), states aerial usage rate shows 140 years remaining landfill capacity. No constraints to growth have been identified.

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to this project.

State Agencies & Regulations

State Water Quality Control Board

"The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters.

The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate."[10]

"The task of protecting and enforcing the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment is an ongoing challenge for the State and

[8] Op Cit. 76.
[9] Op Cit. 78.
[10] State Water Board. Mission Statement. Accessed August 2021 at: http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml

Regional Water Quality Control Boards."[11]

Regional Water Quality Control Board (RWQCB)

"There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology.

Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality.

"The task of protecting and enforcing the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment is an ongoing challenge for the State and Regional Water Quality Control Boards."[12]

State NPDES General Construction Permit

The State NPDES General Construction Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that uses storm water "Best Management Practices" to control runoff, erosion and sedimentation from the site both during and after construction. The SWPPP has two major objectives: (1) to help identify the sources of sediments and other pollutants that affect the quality of storm water discharges; and (2) to describe and ensure the implementation of practices to reduce sediment and other pollutants in storm water discharges.

Local Policy & Regulations

County of Tulare Solid Waste Services

"Solid waste disposal services for the Community of Cutler-Orosi is provided by Pena's Disposal, a private company."[13] Tulare County operates two active landfills: Visalia and Teapot Dome. The Visalia landfill has enough capacity to provide at least 140 years (2014- 2154) of disposal capacity (Scott Pfanstiel, Solid Waste Department).

Assembly Bill 939 requires cities and counties to reduce their solid waste volumes by 25 percent by 1995 and 50 percent by the year 2000. To achieve this reduction in volume, AB 939 requires local entities to devise a materials recovery facility by composting organic materials; recycling paper, metal, glass, and plastic; and by diverting household hazardous waste to the Kettlemen Hills waste facility.

[11] Ibid.
[12] Op. Cit.
[13] Draft Cutler-Orosi Community Plan 2021 Update. Page 78.

Tulare County General Plan

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project in this resource are listed as follows.

PFS-2.1 Water Supply - The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development.

PFS-2.2 Adequate Systems - The County shall review new development proposals to ensure that the intensity and timing of growth will be consistent with the availability of adequate production and delivery systems. Projects must provide evidence of adequate system capacity prior to approval.

PFS-2.3 Well Testing - The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.4 Water Connections - The County shall require all new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing water district service areas, or zones of benefit, to connect to the community water system, where such system exists. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the water system when service becomes readily available.

PFS-2.5 New Systems or Individual Wells - Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.

PFS-3.1 Private Sewage Disposal Standards - The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.2 Adequate Capacity - The County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity.

PFS-3.3 New Development Requirements - The County shall require all new development, within UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing wastewater district service areas, or zones of benefit, to connect to the wastewater system, where such systems exist. The County may grant exceptions in

extraordinary circumstances, but in these cases, the new development shall be required to connect to the wastewater system when service becomes readily available.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-3.7 Financing - The County shall cooperate with special districts when applying for State and federal funding for major wastewater related expansions/upgrades when such plans promote the efficient solution to wastewater treatment needs for the area and County.

PFS-4.1 Stormwater Management Plans - The County shall oversee, as per Community Plan Content Table PF-2.1 and Specific Plan Content, Hamlet Plans Policy PF-3.3, and Table LU-4.3, the preparation and adoption of stormwater management plans for communities and hamlets to reduce flood risk, protect soils from erosion, control stormwater, and minimize impacts on existing drainage facilities, and develop funding mechanisms as a part of the Community Plan and Hamlet Plan process.

PFS-4.2 Site Improvements - The County shall ensure that new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, and Area Plans includes adequate stormwater drainage systems. This includes adequate capture, transport, and detention/retention of stormwater.

PFS-4.3 Development Requirements - The County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance.

PFS-4.4 Stormwater Retention Facilities - The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge.

PFS-4.5 Detention/Retention Basins Design - The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible.

PFS-4.6 Agency Coordination - The County shall work with the Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge.

PFS-4.7 NPDES Enforcement - The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.1 Land Use Compatibility with Solid Waste Facilities - The County shall ensure that solid waste facility sites (for example, landfills) are protected from the encroachment by sensitive and/or incompatible land uses.

PFS-5.3 Solid Waste Reduction - The County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs.

PFS-5.4 County Usage of Recycled Materials and Products - The County shall encourage all industries and government agencies in the County to use recycled materials and products where economically feasible.

PFS-5.8 Hazardous Waste Disposal Capabilities - The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

PFS-5.9 Agricultural Waste - The County shall investigate waste disposal and reuse needs for agricultural wastes for energy and other beneficial uses and shall change County plans accordingly

Cutler-Orosi Community Plan 2030 Update

The Cutler-Orosi Community Plan 2030 Update also has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project in regard to this resource are listed as follows.

GOAL III - Achieve development densities consistent with levels of available service.

Objective I - Urbanization in the planning areas should be contiguous and compact.

Policy 2. The County shall review development proposals for their impacts on infrastructure (for example, sewer, water, fire stations, libraries, streets, etc.). New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. The lack of available public or private services or adequate infrastructure to serve a project, which cannot be satisfactorily mitigated by the project, may be grounds for denial of a project or cause for the modification of size, density, and/or intensity of the project.

Policy 3. The extension of water and sewer facilities into the planning area shall be coordinated with the policies of this Plan and the goals and policies of the Tulare County General Plan. Development in the planning area shall pay their fair share for services

GOAL IV - Coordinate Community Development Decisions with the Cutler PUD and Orosi PUD.

Objective 1 - Ensure that all development can be served by the Cutler Public Utility District (PUD) and Orosi PUD during the planning period**.**

Policy 1. Coordinate zoning with availability of utilities and community services.

Policy 2. Promote commercial and industrial development with wastewater discharge characteristics, which can be accommodated by the Cutler PUD and Orosi PUD.

Policy 3. Encourage industries with excessive effluent to pre-treat Cutler-Orosi wastewater system.

Policy 4. Encourage coordination between developers and the Cutler-Orosi throughout the application and development process to prevent time delays and to assure that the Cutler-Orosi can accommodate the needs of any proposed development.

Policy 5. Before the issuance of any land use permit, the Tulare County Resource Management Agency must receive confirmation from the Cutler-Orosi Wastewater Treatment Plant that water and sewer service requirements can be accommodated.

Policy 6. Assist the Cutler-Orosi Wastewater Treatment Plant in applications for grant funds to carry out their capital improvement program for providing, maintaining and improving their sewer and water systems to serve new and existing developments, which implement the goals and objectives of this Plan and of the Tulare County General Plan.

Policy 7. Prohibit to the extent allowed by law all development from holding, diverting and/or disposing of storm water run-off at locations, or in such a manner, as to cause groundwater recharge contributable to raising the groundwater to an unsafe level in the vicinity of the Cutler/ Orosi wastewater treatment facilities.

Policy 8. Investigate the necessity of preparing a drainage plan, within five years of adoption of the Community Plan, for diverting and disposing of storm water runoff and excess irrigation water at a location, or locations, where the retention or disposition of such water will not contribute to raising the groundwater level in the vicinity of the Cutler-Orosi wastewater treatment facilities.

Policy 9. Before the issuance of any land use permit, the Tulare County Economic and Planning Department will require all project applications for new development or redevelopment to include storm water disposal plans in accordance with the recommendations of the Tulare County Public Works Department and Caltrans to prevent runoff flows into the State highway rights-of-way.

GOAL V - Provide safer and adequate housing for all citizens within the community.

Objective I - Reduce deficiencies in existing housing stock.

Policy 6. The County will ensure that there are adequate sites and will work with the Cutler PUD and Orosi PUD and other agencies to ensure that there are adequate public facilities to support future housing needs in Cutler-Orosi.

GOAL VI – Develop a strong and diversified economy.

Objective I - Provide the services necessary to support new industrial and commercial development.

Policy 1. Encourage the Cutler PUD and Orosi PUD to give priority to community service development in the areas reserved for commercial and industrial growth on the plan.

Policy 2. Place emphasis on development and upgrading of water supply facilities to meet fire protection standards in planned commercial and industrial areas

GOAL VII – Preserve and enhance the quality of life for present and future generation of Cutler-Orosi citizens.

Object III - Protect Agricultural Lands

Policy 5. The County (and developers) shall carefully coordinate the extension of public water and sewer services in the planning area with Cutler Public Utility District (PUD) and Orosi PUD, to promote logical and orderly development patterns

Policy 6. New agricultural preserves and contracts shall not be approved for properties within Cutler PUD and Orosi PUD.

IMPACT EVALUATION

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Project Impact Analysis: ***Less Than Significant Impact***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban

Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon. As noted earlier, the Cutler Public Utility District entered into the Joint Wastewater Treatment and Disposal Facilities Agreement with the Orosi Public Utility District in March 2018, forming the Cutler-Orosi Joint Power Wastewater Authority (Authority) for the purpose of operating a wastewater treatment and disposal facility. Treatment and disposal of the collected effluent is provided at the Cutler-Orosi WWTF, jointly owned and operated by the Cutler PUD and Orosi PUD. It is likely that consulation with the Cutler and Orosi PUDs, as applicable, will occur to determine if adequate capacity is available.

An on-going, non-Project related sewer collection system rehabilitation/replacement project in currently being undertaken withing the Planning Area. According to Cutler and Orosi PUD staff, the sanitary sewer collection system is very old and pipe leaks and breaks cause significant problems including groundwater inflow/infiltration and cross contamination with groundwater. The Orosi PUD is implementing a phased sewer collection system rehabilitation/replacement project, and has awarded a contract for the construction of the Phase 1 improvements. This project is addressing an existing defiency of the existing sewer collection system; it will not, however, add additional capacity to meet future growth.

Also, see Item 3.10 b) Hydrology and Water Quality.

As future development occurs, projects will be evaluated on a case-by-case basis to determine the need for new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. As such, the project would result in a ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, Tulare County General Plan 2030 Update EIR, and/or the Cutler and Orosi Public Utility Districts.

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon. As noted earlier, the Authority will also likely be consulted to determine if adequate wastewater treatment and disposal capacity is available. Treatment and disposal of the collected effluent is provided at the Cutler-Orosi WWTF, jointly owned and

operated by the Cutler and Orosi PUDs. As future development occurs, projects will be evaluated on a case-by-case basis. Consultation with Cutler and Orosi PUDs, as applicable, will also occur. As the Project will result in ***Less Than Significant Project-specific and Cumulative Impacts*** through the Year 2030 Planning horizon to this resource.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple years?

Project Impact Analysis: ***Less Than Significant Impact***

There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As future development occurs, projects will be evaluated on a case-by-case basis to determine the need for new or expanded water. Consultation with Cutler and Orosi PUDs, as applicable, will also occur. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon. Also see Response to Item 3.19 a). As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, Tulare County General Plan 2030 Update EIR, and/or the Cutler and Orosi Public Utility Districts.

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Consultation with Cutler and Orosi PUDs, as applicable, will also occur. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon.

The proposed Project will result in a ***Less Than Significant Cumulative Impact*** to the water supply through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Project Impact Analysis: ***Less Than Significant Impact***

See Item 3.19 a. A ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, Tulare County General Plan 2030 Update EIR, and/or the Cutler and Orosi Public Utility Districts.

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Consultation with Cutler and Orosi PUDs, as applicable, will also occur. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon. As such, the Project will result in ***Less Than Significant Project-specific and Cumulative Impacts*** through the Year 2030 Planning horizon to this resource Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of

local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon.

"Solid waste disposal services for the Community of Cutler-Orosi is provided by Pena's Disposal, a private company. Solid waste generated in Cutler-Orosi can be disposed of at the Visalia Landfill, located at 22466 Road 80, Visalia, California."[14] Tulare County operates two active landfills: Visalia and Teapot Dome. Teapot Dome Landfill will be closed FY 22-23 while Woodville Landfill will re-intiate operations FY22-23. The Visalia landfill has enough capacity to provide at least 140 years (2014- 2154) of disposal capacity (2019 conversation with Mr. Scott Pfanstiel, Solid Waste Department, (retired)).

Assembly Bill 939 requires cities and counties to reduce their solid waste volumes by 25 percent by 1995 and 50 percent by the year 2000. To achieve this reduction in volume, AB 939 requires local entities to devise a materials recovery facility by composting organic materials; recycling paper, metal, glass, and plastic; and by diverting household hazardous waste to the Kettlemen Hills waste facility. As noted earlier, based on the estimated, minimal 140-year capacity of nearby Visalia landfill, Cutler-Orosi's solid waste needs can be accommodated during the Year 2030 planning horizon. As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, Tulare County General Plan 2030 Update EIR, and/or the Cutler and Orosi Public Utility Districts.

Less Than Significant Cumulative Impacts will occur related to this Checklist Item through the Year 2030 Planning horizon will occur.

Mitigation Measure(s): ***None Required.***

[14] Op Cit. 79.

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Project Impact Analysis: ***Less Than Significant Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon.

Solid waste disposal must comply with the requirements of the contracted waste hauler, which follows federal, state, and local statutes and regulations related to the collection of solid waste. The proposed Project will comply with all state and local waste diversion requirements regarding trash and recycling areas. As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, General Plan 2030 Update Background Report, Tulare County General Plan 2030 Update EIR, and/or the Cutler and Orosi Public Utility Districts.

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. It is anticipated that this resource can be accommodated through the Year 2030 planning horizon. The proposed Project will result in ***Less Than Significant Project-specific Impacts*** and thus will result in ***Less Than Significant Cumulative Impacts*** through the Year 2030 Planning horizon.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item through the Year 2030 Planning horizon will occur.

ABBREVIATIONS AND ACRONYMS

AB	Senate Bill (in California)
CEQA	California Environmental Quality Act
CPUD	Cutler Public Utility District
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
FAT	Fresno Air Terminal (aka, Fresno-Yosemite International Airport)
GPM	gallons per minute
LAFCO	Tulare County Local Agency Formation Commission
OPUD	Orosi Public Utility District
MCL	Maximum Concentration Level
MGD	million gallons per day
MSR	Municipal Service Review
NPDES	National Pollutant Discharge Elimination System
RMA	Tulare County Resource Management Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill (in California)
SOI	Sphere of Influence
SWWPP	Storm Water Pollution Prevention Plan
UDB	Urban Development Boundary
WDR	Waste Discharge Requirements
WWTF	Wastewater Treatment Facility

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Section 15126.2(a). Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC.

Tulare County. Draft Cutler-Orosi Community Plan 2021 Update. Included in Appendix "F" of this Draft EIR.

Tulare County. Tulare County General Plan 2030 Update. August 2012. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20

Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf

Tulare County General Plan 2030 Update. Background Report. Accessed July 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.

U.S. EPA's Summary of the Resource Conservation and Recovery Act, which can be accessed at http://www.epa.gov/epawaste/laws-regs/rcrahistory.htm

Wildfire
Chapter 3.20

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in result in ***No Impact*** related to Wildfire through the Year 2030 Planning horizon. Also, as there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2021 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

As contained in the Proposed Updates to the CEQA Guidelines (finalized in November 2018), "Senate Bill 1241 (Kehoe, 2012) requires the Office of Planning and Research, the Natural Resources Agency, and CalFire to develop "amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code." (Pub. Resources Code, § 21083.01 (emphasis added).)"[1]

At section 15126.2, the CEQA Guidelines state, "(a) The Significant Environmental Effects of the Proposed Project. An EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant

[1] California Environmental Quality Act (CEQA) Guidelines. Section 15126.2(a). Accessed August 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans, addressing such hazards areas."[2]

To provide an explanation on why it determined that analyzing potential impacts resulting from wildfire, the California Natural Resources Agency ("Natural Resources Agency" or "Agency) provided a document titled the *"Final Statement of Reasons For Regulation Action Amendments to the State CEQA Guidelines"* ("Final Statement of Reasons"). The amendments address legislative changes to the California Environmental Quality Act (CEQA), clarify certain portions of the existing CEQA Guidelines, and update the CEQA Guidelines to be consistent with recent court decisions. As noted in the Final Statement of Reasons, "The CEQA Guidelines are unique among administrative regulations. They provide a carefully organized, step-by-step guide to the environmental review process. As a result, rather than turning to the statute and case law, many agency staff and planners look to the CEQA Guidelines as a comprehensive source of information regarding CEQA's requirements."[3]

In the Final Statement of Reasons document, specifically at "12. CEQA Requires Analysis of the Potential Impacts Associated with Wildfire", the Agency writes, "Some comments suggested that the Agency should not include questions in Appendix G related to wildfire. In part, those comments suggested that the California Supreme Court's decision in CBIA v. BAAQMD (2015) 62 Cal.4th 369 precludes the analysis of such hazards on proposed projects. The Agency disagrees. In that decision, the Court held that "agencies subject to CEQA *generally* are not required to analyze the impact of existing environmental conditions on a project's future users or residents." (*Id*. at p. 377 (emphasis added).) The Court's opinion also included a significant caveat: "[w]hen a proposed project risks exacerbating those environmental hazards or conditions that already exist an agency must analyze the potential impact of such hazards on future residents or users." (*Id*., at p. 377.)

In this context, an effect that a project "risks exacerbating" is similar to an "indirect" effect. Describing "indirect effects," the CEQA Guidelines state: "If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment." (CEQA Guidelines, § 15064, (d)(2).) Just as with indirect effects, a lead agency should confine its analysis of exacerbating effects to those that are reasonably foreseeable. (*Id*. at subdivision (d)(3).)

In the context of wildfire, it is clear that development may exacerbate wildfire risks. OPR's General Plan Guidelines, for example, includes an extensive discussion of the interaction between

[2] Governor's Office of Planning and Research Final Adopted Text for Revisions to the CEQA Guidelines. 2018 Page 30. Accessed August 2021 at: http://resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf

[3] California Natural Resources Agency Final Statement of Reasons For Regulation Action Amendments to the State CEQA Guideline OAL Notice File No. Z-2018-0116-12. November 2018. Page 2. Accessed August 2021 at: http://resources.ca.gov/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf.

development and wildfire risk areas, including the "wildland-urban interface." While wildfire risk already exists in such areas, bringing development to those areas makes the risk worse, and not just for fire risk. Recent research explains:

> The close proximity of houses and wildland vegetation does more than increase fire risk. As houses are built in the WUI, native vegetation is lost and fragmented; landscaping introduces nonnative species and soils are disturbed, causing nonnatives to spread; pets kill large quantities of wildlife; and zoonotic disease, such as Lyme disease, are transmitted.

(Radeloff, et al., "Rapid growth of the US wildland-urban interface raises wildfire risk," PROC NATL ACAD SCI USA (March 27, 2018) 115 (13) 3314-3319 [citations omitted].) Not all development types are likely to create the same risks, however:

> The recognition that homes are vulnerable to wildfire in the wildland-urban interface (WUI) has been established for decades… Analysis of hundreds of homes that burned in southern California the last decade showed that housing arrangement and location strongly influence fire risk, particularly through housing density and spacing, location along the perimeter of development, slope, and fire history. Although high-density structure-to-structure loss can occur, structures in areas with low-to-intermediate housing density were most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. Fire frequency also tends to be highest at low to intermediate housing density, at least in regions where humans are the primary cause of ignitions.

(Syphard AD, Bar Massada A, Butsic V, Keeley JE (2013) "Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss." PLoS ONE 8(8): e71708. https://doi.org/10.1371/journal.pone.0071708 [citations omitted].) In other words, low-density, leapfrog development may create higher fire risk than high-density, infill development.

> Notably, Senate Bill 1241 (Kehoe, 2012) specifically required the Agency to update Appendix G with questions related to wildfire risk. One could view wildfire as a specific legislatively-created exception to the general rule the Court described in the CBIA decision, though the Court did not specifically analyze its provisions. In any event, the Agency drafted the questions in the new wildfire section to focus on the effects of new projects in creating or exacerbating wildfire risks."[4]

Thereafter, the CEQA Checklist was updated to include questions related to fire hazard impacts for projects located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Wildfire section addresses factors that could expose people or structures to fire or post-fire flooding or landslides, risk or impair emergency response, or require installation of infrastructure that could exacerbate fire risk.

[4] Ibid. 86 and 87.

CEQA Thresholds of Significance

- Impair an adopted emergency response plan or emergency evacuation plan.
- Exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

ENVIRONMENTAL SETTING

"A wildfire is an uncontrolled fire spreading through vegetative fuels. Wildfires can be caused by human activities (such as arson or campfires) or by natural events (such as lightning). Wildfires often occur in forests or other areas with ample vegetation. Wildfires differ from other fires due to their large size, the speed at which the fires can spread, and the ability of the fire to change direction unexpectedly and to jump gaps, such as roads, rivers, and fire breaks. In areas where structures and other human development meet or intermingle with wildland or vegetative fuels (referred to as the wildland urban interface or WUI), wildfires can cause significant property damage and present extreme threats to public health and safety. The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas.

Topography: As slope increases, the rate of wildfire spread increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridgetops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill.

Fuel: The type and condition of vegetation plays a significant role in the occurrence and spread of wildfires. Certain types of plants are more susceptible to burning or will burn with greater intensity, and non-native plants may be more susceptible to burning than native species. Dense or overgrown vegetation increases the amount of fuel load. The ratio of living to dead plant matter is also important. The risk of fire increases significantly during periods of prolonged drought, as the moisture content of both living and dead plant matter decreases; or when a disease or infestation has caused widespread damage. The fuel's continuity, both horizontally and vertically, is also an important factor.

Weather: The most variable factor affecting the behavior of wildfires is weather. Temperature, humidity, wind, and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signal reduced wildfire occurrence and easier containment. Years of precipitation followed by warmer years tend to encourage more widespread fires and longer burn periods. Also, since the mid-1980s, earlier snowmelt and associated warming due to global climate change has been associated with longer and more severe wildfire seasons in the western U.S.

Wildfires can have serious effects on the local environment, beyond the removal of vegetation. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards, as described above. Wildfires can also greatly affect the air quality of the surrounding area.

History: Historical information between 1910 and 2014 indicates that 610 wildfires occurred in the County which burned approximately 1,328,000 acres during this 104-year time period. The following causes represent approximately 95% of the 610 recorded wildfires (approximately 1.3 million acres), and are included as follows: miscellaneous 36% (532,800 acres); lightning 27% (309,000 acres); unknown or unidentified 14% (97,000 acres); arson 8% (63,300 acres); equipment use 5% (43,500 acres); smoking 3% (53,400 acres); and campfires 2% (184,600 acres). The remaining causes which include escaped prescribed burns, debris, vehicles, structures, power-lines, railroads and playing with fire account for the remaining 5% (44,400 acres) of the recorded wildfires. Appendix C [of the Tulare County 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP)] lists documented fires over 1000 acres that have burned in the County since 1985.

Location: Public Resources Code 4201-4204 and Government Code 51175-89 directed CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones are referred to as fire hazard severity zones and represented as very high, high and moderate. Specifically, the maps were created using data and models describing development patterns, potential fuels over a 30- to 50-year time horizon, expected fire behavior and expected burn probabilities. The maps are divided into local responsibility areas and State responsibility areas.

Local responsibility areas generally include incorporated cities, cultivated agriculture lands and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to the local government. The fire hazard severity zones for the area of local responsibility in the County are shown on Figure B-4 (Appendix B, Hazard Figures [in the MJLHMP). Fire severity zones are depicted for the Cities of Porterville and Woodlake in Figures B-13 and B-20 (Appendix B, Hazard Figures MJLHMP).

State responsibility area is a legal term defining the area where the State has financial responsibility for wildfire protection. Incorporated cities and Federal ownership are not included. The prevention and suppression of fires in all areas that are not State responsibility areas are primarily the responsibility of local or Federal agencies.

The portion of the County that transitions from the valley floor into the foothills and mountains is characterized by high to very high threat of wildfire; this includes the cities of Porterville and Woodlake, the jurisdiction of Tulare County Office of Education (TCOE), the Tule River Tribe Reservation and areas of the County unincorporated. Steeper terrain in these areas increases the

threat of wildfire. The western portion of the County has little or no threat of wildfire. The risk of wildfire increases where human access exists in high fire hazard severity zones, such as the Sierra Nevada Mountains and foothills, because of a greater chance for human carelessness and because of historic and current fire management practices.

Impact of Climate Change: Climate and weather have long been acknowledged as playing key roles in wildfire activity, and global warming is expected to exacerbate fire impacts on natural and urban ecosystems. Predicting future fire regimes requires an understanding of how temperature and precipitation interact to control fire activity.[7] Since 2012, record drought and record temperatures, have weakened trees throughout California, resulting in millions of acres of failing forestland that then become vulnerable to disease and infestation. Infestations, such as those caused by native bark beetles, have caused tree mortality of epidemic proportions. The scale of tree mortality in California contributes to significantly increased wildfire risks, and presents life safety risks due to falling trees that can injure or kill people. The immediate consequence of tree mortality on California forestlands increases the potential for wildfires, further spread of forest insect tree damage, threats to critical public safety infrastructure from falling trees, reduced forest carbon stocks, loss of commercial timber values to landowners, and diminished wildlife habitat. Due to these increased risks, the County proclaimed states of emergency for tree mortality.

In addition, and in response to the millions of dead trees, a State of Emergency Proclamation was issued by the Governor. A Tree Mortality Task Force, comprised of State and Federal agencies led by CAL FIRE, Cal OES and the Governor's office has identified six counties as high hazard zones due to dead and dying trees and the hazards, this tree mortality presents. The 10 counties include: Amadore, Calaveras, El Dorado, Fresno, Kern, Madera, Mariposa, Placer, Tulare, and Tuolumne. Both the State's and the County's Tree Mortality Task Forces are structured as a Multi-Agency Coordination Group and meet monthly to exchange information and updates among stakeholders. Participants are encouraged to discuss needs and concerns, and leverage each other's subject matter expertise and resources to further response efforts.

Extent: CAL FIRE has classified 22% of the County as high wildfire hazard areas and an additional 27% as very high wildfire hazard areas. These areas are primarily in the foothills and mountain regions in the eastern portion of the County and to a large extent on National Forest or National Park land. Figure B- [in the MJLHMP] depicts the fire severity rating for areas of the County.

Probability of Future Events: Based on historical events, on average, slightly more than on wildfire of over 1000 acres burns within the County each year. Therefore, it is highly likely that a wildfire event will occur within the calendar year impacting the County. Wildfire events have a greater than 1 in 1-year (100%) chance of occurring."[5]

The Project's location does not lend itself to wildfire risk as it is not within a fire hazard severity zone (as identified by CalFire), lacks slope/terrain conducive to wildfire spread, lacks vegetation which would fuel wildfire (i.e., dense vegetation consisting of shrubs and bushes, dead or dying

[5] Tulare County 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP). March 2018. Pages 69-73. Accessed August 2021 at: http://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/.

trees caused by drought or pest infestation (i.e., bark beetle), is surrounded by predominantly agriculturally productive lands, and, as noted earlier, is in the western portion of the County which has little or no threat of wildfire.

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to this Project.

State Agencies & Regulations

Senate Bill 1241 (Kehoe, 2012)

"Wildfire: Senate Bill 1241 (Kehoe, 2012) required the Office of Planning and Research, the Natural Resources Agency, and CalFire to develop "amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code." (Pub. Resources Code, § 21083.01 (emphasis added).) The Agency added several questions addressing this issue. Notably, while SB 1241 required the questions to address specific locations, it did not necessarily limit the analysis to those locations, and so the Agency posed the questions for projects located within "or near" those zones. Lead agencies will be best placed to determine precisely where such analysis is needed outside of the specified zones."[6]

"The safety elements of local general plans will also describe potential hazards, including: "any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards …, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires." (Gov. Code § 65302(g)(1).) Hazards associated with flooding, wildfire and climate change require special consideration. (Id. at subd. (g)(2)-(g)(4).) Lead agencies must "discuss any inconsistencies between the proposed project and applicable general plans" related to a project's potential environmental impacts in a project's environmental review. (State CEQA Guidelines § 15125(d).) Local governments may regulate land use to protect public health and welfare pursuant to their police power. (Cal. Const., art. XI, § 7; California Building Industry Assn. v. City of San Jose (2015) 61 Cal. 4th 435, 455 ("so long as a land use restriction or regulation bears a reasonable relationship to the public welfare, the restriction or regulation is constitutionally permissible").)"[7]

[6] Ibid. 70.
[7] Ibid. 38 and 39.

CAL FIRE - Tulare Unit Strategic Fire Plan[8]

As summarized in the 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP), "The Plan is a local road map to create and maintain defensible landscapes in order to protect vital assets. It seeks to reduce firefighting cost and property loss, increase public and firefighter safety, minimize wildfire risk to communities and contribute to ecosystem health. The Plan identifies pre-suppression projects including opportunities for reducing structural ignitability, and the identification of potential fuel reduction projects and techniques for minimizing those risks. The central goals that are critical to reducing and preventing the impacts of fire revolve around both suppression efforts and fire prevention efforts. The MJLHMP fire hazard analysis and fire related mitigation measures will be provided to Cal Fire to support the Tulare Unit Strategic Fire Plan."[9]

Cal Fire publishes Fire Hazard Severity Zone Maps for all regions in California, which can be viewed here https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-map.[10] The fire hazard measurement used as the basis for these maps includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front. Lead agencies and project proponents can review the Cal Fire maps to determine whether a given project site will be subject to the new CEQA wildfire impacts analysis.

Local Policy & Regulations

Tulare County Health and Safety Element

During the update of the Health and Safety Element (H&S Element), the County was compelled to comply with AB 162 (regarding flooding) and SB 5 (flood hazard mapping). Wildfire can directly impact contribute to potential flooding opportunities as vegetation that would otherwise provide soil stability could be removed to the extent that exposed soil is vulnerable to land- or mudslides. Such events could subsequently damage/destroy structures (such as buildings), roadways, telecommunications towers, utility lines, etc., or result in land- or mudslide debris (e.g., vegetation, soil, destroyed structures, etc.) entering watercourses such as streams, rivers, lakes, etc. which could damage/destroy habitat, water quality, bridges, shorelines, etc.

As such, the Health and Safety Element addresses AB 162 and SB 5 by including Policies (Section 10.5 Flood Hazards and 10.6 Wildland Fire Hazards) and Implementation Measures in section 10.10. It also contains the following narrative: "Assembly Bill 162 (AB 162), adopted in 2007, amended Government Code Section 65302(d)(3) and (g)(2)) to require cities and counties to identify information regarding flood hazards upon revision of the jurisdiction's housing element on or after January 1, 2009. The requirements of Government Code Section 65302 (d)(3) and

[8] CAL FIRE. Tulare Unit Strategic Fire Plan. Last Update 06 May 2020. Accessed August 2021 at: https://osfm.fire.ca.gov/media/4bph0rby/2020-tuu-fire-plan.pdf.
[9] 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan; Section 3. Page 15. Accessed August 2021 at: https://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/
[10] CAL FIRE California Fire Hazard Severity Zone Map Update Project. Accessed August 2021 at: https://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps

(g)(2)(A) are addressed in this General Plan Update as follows: Figure 10-1 (Flood Hazards and Faults [in the H&S Element]) displays information based on historic and current data regarding flood waters. https://egis.fire.ca.gov/FHSZ/

Figure 10-1 [in the H&S Element] shows:

1) The flood hazard zones (i.e.; 100- and 500-Year Flood Zones) from the National Flood Insurance Rate maps published by Federal Emergency Management Agency (FEMA);
2) The dam failure inundation maps prepared pursuant to Section 8589.5 that are available from California Emergency Management Agency;
3) The California Department of Water Resources (DWR) Awareness Floodplain Mapping Program maps.

Figure 10-2 (Fire Threat [in the H&S Element]) shows:

1) Data on areas vulnerable to wildfire; and,
2) Urban development boundaries, hamlet development boundaries, and mountain service centers where existing and planned development will occur including structures, roads, utilities, and essential public facilities.

Used in conjunction, Figures 10-1 and 10-2 [in the H&S Element] show areas where FEMA flood zones and fire threats overlap to identify areas vulnerable to flooding after wildfires; The Figures also show where flood hazard zones are within these urban boundaries."[11]

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. However, as the Project area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones, no General Plan policies would apply to the proposed Project.

IMPACT EVALUATION

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Project Impact Analysis: ***No Impact***

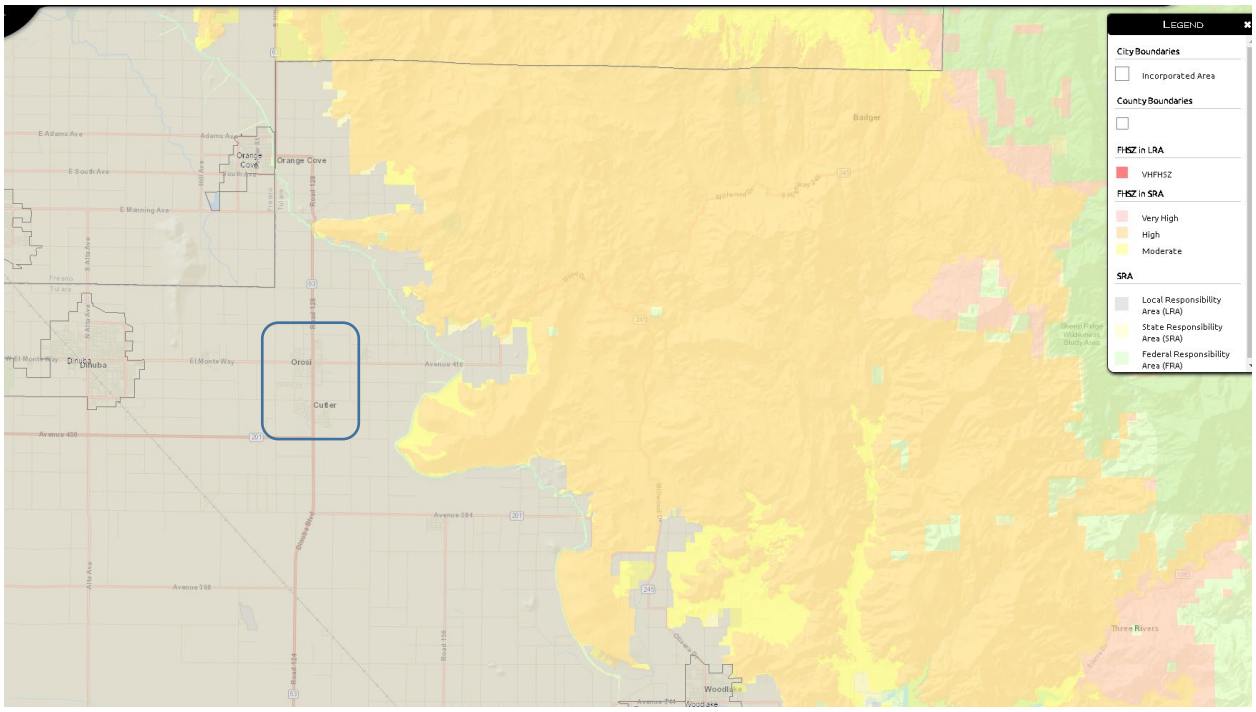
There are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is

[11] Tulare County Health and Safety Element Goals and Policies Report. Page 10-3. Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/002Board%20of%20Supervisors%20Materials/001BOS%20Agenda%20Items%20-%20Public%20Hearing%20August,%2028%202012/008Attachment%20G.%20Public%20Comment,%20%20Staff%20Matrix,%20and%20Responses/004Item%204.%20GPU%20AMUS/17-CHP%2010%20Health%20&%20Safety.pdf

consistent with the Tulare County General Plan 2021 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

The Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; rather, it is located on the Valley floor in a predominantly rural, agricultural area on relatively flat land (i.e., 0-2% slopes). As such, it would result in ***No Impact*** to this resource item. See **Figure 3.20-1.**

Figure 3.20-1
Fire Hazard Severity Zone Map



Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or the Tulare County General Plan 2030 Update EIR. With No Project-specific Impact, No Cumulative Impact will also occur.

Mitigation: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, implementation of the proposed Project will result in No Impact to this Checklist Item.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Project Impact Analysis: ***No Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2021 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs.

Also as noted earlier, the Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; rather, it is located on the Valley floor in a predominantly rural, agricultural area on relatively flat land (i.e., 0-2% slopes). As such, there is no possibility that the Project would exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, the Project would result in No Impact to this resource Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or the Tulare County General Plan 20303 Update EIR. With No Project-specific Impact, ***No Cumulative Impact*** will occur.

Mitigation: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, implementation of the proposed Project will result in ***No Impact*** to this Checklist Item.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Project Impact Analysis: ***No Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2021 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. As such, there is no possibility that the Project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Therefore, the Project would result in ***No Impact*** to this resource Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or the Tulare County General Plan 2030 Update EIR. With ***No Project-specific Impact***, ***No Cumulative Impact*** will also occur.

Mitigation: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, implementation of the proposed Project will result in ***No Impact*** to this Checklist Item.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Project Impact Analysis: ***No Impact***

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update, update of Zoning classifications, and update of the Zoning Map for the Cutler-Orosi Planning Area. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Due to the nature of the Project, it would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The Project is located on the Valley floor in on relatively flat land (i.e., 0-2% slopes), as such it is not located in an area where landslides or post-fire slope instability would occur. The site is not crossed by any rivers, streams, canals, or irrigation ditches. As such, it is not at risk of down-stream flooding. Also, as noted in Item b), the surface topography of the site is relatively flat. As future development occurs, grading within the Planning Area is anticipated to include, where applicable,

engineered grading designs that must be approved and permitted by Tulare County. Therefore, the Project would result in ***No Impact*** to this resource item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or the Tulare County General Plan 2030 Update EIR. With No Project-specific Impact or Cumulative Impact will occur.

Mitigation: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, implementation of the proposed Project will result in ***No Impact*** to this Checklist Item.

DEFINITIONS/ACRONYMS

Definitions

Abbreviations and Acronyms

California Natural Resources Agency	California Natural Resources Agency or Agency
CBIA v. BAAQMD	California Building Industry Association versus Bay Area Air Quality Management District
CAL FIRE	California Department of Forestry and Fire Protection
H&S Element	Tulare County General Plan Health and Safety Element
MJLHMP	Multi-Jurisdictional Local Hazard Mitigation Plan
TCOE	Tulare County Office of Education
SB 1241	California Senate Bill 1241 (Kehoe, 2012)
WUI	Wildland-Urban Interface

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Mandatory Findings of Significance
Chapter 3.21

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan 2021 Update (Project, Community Plan Update, Plan Update, or Update) will result in ***Less Than Significant Impacts With Mitigation*** through the Year 2030 Planning horizon. Cumulative impacts are summarized in Chapter 4 Summary of Cumulative Impacts. The analyses contained in this environmental document demonstrate that there are no other impacts that will substantially degrade the quality of the environment, or impact sensitive species, or have significant cultural impacts, or impact human beings requiring a mandatory finding of significance.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA Guidelines "Mandatory Findings of Significance" (Section 15065(a)) lists the following potential impacts that need to be addressed by a lead agency:

15065(a): *"A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:*

> *(1) The project has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.*
>
> *(2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.*
>
> *(3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.*
>
> *(4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."*

Under the California Environmental Quality Act (CEQA), an EIR must be prepared when certain specified impacts may result from construction or implementation/operation of a project. An EIR has been prepared for the proposed Project, which fully addresses all of the Mandatory Findings of Significance, as described below.

Under Section 15065(a) of the CEQA Guidelines, a finding of significance is required if a project "has the potential to substantially degrade the quality of the environment." In practice, this is the same standard as a significant effect on the environment, which is defined in Section 15382 of the CEQA Guidelines as "a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." This EIR, in its entirety, addresses and discloses potential environmental affects associated with construction- and operations-related activities of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

Aesthetics	Agriculture and Forestry Resources
Air Quality	Biological Resources
Cultural Resources	Energy
Geology and Soils	Greenhouse Gas Emissions
Hazards and Hazardous Materials	Hydrology and Water Quality
Land Use and Planning	Mineral Resources
Noise	Population and Housing
Public Services	Recreation
Transportation/Traffic	Tribal Cultural Resources
Utilities and Service Systems	Wildfire

As summarized in Project Requirements/Mitigation Measures Section, this EIR discusses potential environmental resource impacts, the level of significance prior to mitigation, project requirements that are otherwise required by law or are incorporated as part of the project description, feasible mitigation measures, and the level of significance after the incorporation of mitigation measures.

This section of the Draft Environmental Impact Report (DEIR) meets CEQA requirements by making Mandatory Findings of Significance relative to impacts of the proposed Project site, located in the San Joaquin Valley, in the northwesterly valley floor portion of Tulare County. The "Environmental Setting" section summarizes environmental resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Long Term Impacts

As described in Section 15065(a)(2), a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the

potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. This document addresses the short-term and irretrievable commitment of natural resources to ensure that the consumption is justified on a long-term basis.

Cumulative Impacts

Under Section 15065(a)(1) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species. Section 4.3 (Biological Resources) of the EIR fully addresses impacts related to the reduction of the fish or wildlife habitat, the reduction of fish or wildlife populations, and the reduction or restriction of the range of special-status species.

Impacts to Species

Section 15065(a)(1) of the CEQA Guidelines states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to eliminate important examples of a major period of California history or prehistory. Section 15065(a)(1) amplifies Public Resources Code 21001(c) requiring that major periods of California history are preserved for future generations. It also reflects the provisions of Public Resource Code Section 21084.1 requiring a finding of significance for substantial adverse changes to historical resources.

Impacts to Historical Resources

Section 15064.5 of the CEQA Guidelines establishes standards for determining the significance of impacts to historical resources and archaeological sites that are an historical resource. Section 4.4 (Cultural Resources) of this EIR (which is supported by a Cultural Resources Technical Report) fully addresses impacts related to California history and prehistory, historic resources, archaeological resources, and paleontological resources.

Impacts on Human Beings

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings will be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and

water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this EIR.

Thresholds of Significance

The geographical area may be countywide, statewide, or nationwide, depending on the nature of the impact. Thresholds of Significance for impacts to biological resources are addressed in detail in Chapter 3.4 of this document. Thresholds of Significance for impacts to cultural resources, including impacts to historic and prehistoric resources, are addressed in Chapter 3.5 of this EIR.

ENVIRONMENTAL SETTING

"Cutler-Orosi are located in California's central San Joaquin Valley, in the easterly Valley floor portion of Tulare County (see Figure 1 [in the Community Plan Update, **Figure 2-1** in this Draft EIR]). The two adjacent communities lie in the midst of one of the most productive agricultural regions in the world, and are virtually surrounded by field crops, orchards, and vineyards

Tulare County is located in central California in the heart of the San Joaquin Valley. The County is composed of eight incorporated cities and numerous unincorporated communities. Most of the unincorporated communities and all of the cities are located on the Valley floor. The foothills and Sequoia and Kings Canyon National Parks form the eastern half of the County.

Cutler-Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the county seat. Both communities are located along State Route (SR) 63 about one half mile apart. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler. The communities are situated at the base of the Sierra Nevada Mountain foothills.

Cutler is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses 0.8 square miles of land **(see Figure 2-1)**. Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses 2.4 square miles of land. It is directly served by State Route (SR) 63. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast"[1].

Native Vegetation

[1] Tulare County. Draft 2021 Cutler-Orosi Community Plan Update. Pages 22-23.

The native vegetation of the Valley is predominately characterized by the purple needlegrass series, valley oak series, vernal pools and wetland communities, and blue oak series. Fauna associated with this section include mule deer (Odocoileus hemionus), black-tailed deer (Odocoileus hemionus columbianus), coyotes (Canis latrans), white-tailed jackrabbits (Lepus townsendii), kangaroo rats (Dipodomys ingens), kit fox (Vulpes macrotis), and muskrats (Ondatra Zibethicus). Birds include waterfowl, hawks, golden eagles (Aquila chrysaetos), owls, white-tailed kites (Elanus leucurus), herons, western meadowlark (Sturnella neglecta) and California quail (Callipepla californica).[2]

BIOLOGICAL RESOURCES

"Cutler-Orosi is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development. A California Natural Diversity Database (CNDDB) search conducted on July 25, 2018, (see Figure 10 in the Community Plan update) indicated there are special status species within the Orange Cove South Quadrant Species List (which includes the Cutler-Orosi Planning Area) consisting of three animal species and one plant species: California tiger salamander (Ambystoma californiense, Federal and State threatened); vernal pool fairy shimp (Branchinecta lynchi, Federal Threatened); and vernal pool tadpole shrimp (Lepidurus packardi Federally endangered); and San Joaquin Valley adobe sunburst (Pseudobahia peirsonii, Federal Threatened and State Endangered)."[3]

"Potentially significant impacts to biological resources associated with future development of the planning area include construction-related loss of Sanford's arrowhead individuals or populations; construction-related mortality of western pond turtles, Swainson's hawks, burrowing owls, other nesting raptors and migratory birds (including tricolored blackbird, white-tailed kite, and loggerhead shrike), and colonially roosting bats; project-related loss of Swainson's hawk foraging habitat and burrowing owl nesting, roosting, and foraging habitat; and project-related loss of riparian trees. These impacts can be reduced to a less than significant level under the California Environmental Quality Act (CEQA) by (1) conducting preconstruction surveys for sensitive resources, (2) avoiding or relocating any Sanford's arrowhead populations that are found in future project areas, (3) relocating any western pond turtles that are found in or around aquatic habitat to be impacted by future projects, (4) avoiding active bird/bat nests and roosts, (5) providing compensatory mitigation for project-related loss of Swainson's hawk and burrowing owl habitat, should the active nests/roosts of these birds be documented within or near future project areas, and (6) providing compensatory mitigation for any loss of riparian trees that results from future project activities.

Impacts associated with future development of the planning area would be less than significant, as defined by CEQA, for all other locally-occurring special status plants and animals, jurisdictional waters, wildlife movement corridors, sensitive natural communities, designated critical habitat, and local policies and habitat conservation plans. With the exception of the

[2] Tulare County General Plan 2030. Background Report. Page 9-10. Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf.
[3] Tulare County. Draft 2021 Cutler-Orosi Community Plan Update. Pages 56.

Swainson's hawk and burrowing owl, loss of habitat for special status animal species is considered a less than significant impact under CEQA."[4]

CULTURAL RESOURCES

As indicated in Chapter 3.5 Cultural Resources, the proposed Draft Cutler-Orosi Community Plan 2021 Update (Community Plan Update, Plan Update, Update, or Project) will result in less than significant impact within the planning horizon (Year 2030). However, as development occurs, it is possible to encounter previously unknown cultural resources. Based upon this uncertainty, the project would result in a ***Less Than Significant Impact With Mitigation*** to Cultural Resources.

The Southern San Joaquin Valley Information Center, Bakersfield (Center or SSJVIC) conducted a cultural resources record search for the Project. The Center records search results in October 2018 identified two recorded cultural resource within the project area, and there is one recorded resource within the one-half mile radius. Seventeen previous cultural resources surveys have been completed within the study area. These resources consist of two historic era buildings and one historic era canal. There have been no additional studies within the one-half mile radius.[5]

The records search included an historic site (Orosi Branch Library) listed on the National Register of Historic Places and California Register of Historic Resources. There are no recorded cultural resources within the Project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

As indicated in the response letter received from the Southern San Joaquin Valley Information Center (SSJVIC), "We understand this project consists of a General Plan Update for the Cutler-Orosi Community. Further, we understand no immediate ground disturbance will take place as a result of this update. Therefore, no further cultural resource investigation is recommended at this time. However, prior to any future ground disturbance project activities, we recommend a new record search be conducted so our office can then make project specific recommendations for further cultural resources study, if needed. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can

[4] *"Cutler-Orosi Community Plan Update Biological Evaluation Tulare County, California."* May 2021. Page i. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of the Draft EIR.
[5] Ibid.

consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed."[6]

The Native American Heritage Commission (NAHC) was contacted on October 19, 2018 (by RMA) requesting a Scared Lands File (SLF) Search and Tribal Consultation List. The NAHC provided a response to the request in a letter dated October 18, 2018, (see Appendix "C") that a records search of the NAHC indicated "negative results" (that is, an absence of any known sacred lands). Further, the NAHC response noted, "Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource. This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process."[7]

As noted earlier, there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary (UDB) will also be expanded to accommodate projected growth and land use needs. Although the Project does not include any immediate development proposals, utilization of the available data is integral to planning for future uses and activities and to determine the best management strategy for such resources at this phase of the planning process. All actions taken pursuant to the Plan Update will be consistent with the California Environmental Quality Act (CEQA) which states that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which includes archaeological resources. Further, as identified in Chapters 3.5 Cultural Resources and 3.18 Tribal Cultural Resources, General Plan policies, as applicable, will be implemented to protect cultural, historical, archaeological, and tribal resources. Once specific projects are planned, specific site studies can be conducted to avoid or minimize impacts to verifiable cultural resources.

Despite the absence of documented cultural resources within the project area, undiscovered potentially significant resources might still exist in the area. Based on this analysis, implementation of **Mitigation Measures 3.5-1** through **3.5-3** (described in detail in Chapter 3.5 Cultural Resources) will reduce potential Project-specific impacts related to Cultural Resources to ***Less Than Significant***.

REGULATORY SETTING

Federal Agencies & Regulations

[6] California Historical Resources Information System (CHRIS). Southern San Joaquin Valley Information Center. California State University, Bakersfield (included in Appendix "C" of this Draft EIR).

[7] State of California. Native American Heritage Commission. Scared Lands Files search and Tribal consultation list response dated October 18, 2018 (included in Appendix "C" of this Draft EIR).

See Chapters 3.4, 3.5, 3.9, 3.10, 3.13, and 3.17 of this document for federal regulations related to Biological Resources, Cultural Resources, Hazards & Hazardous Materials, Hydrology & Water Quality, Noise, and Transportation/Traffic.

State Agencies & Regulations

See Chapters 3.4, 3.5, 3.9, 3.10, 3.12, 3.13, and 3.17 of this document for state regulations related to Biological Resources, Cultural Resources, Hazards & Hazardous Materials, Hydrology & Water Quality, Noise, and Transportation/Traffic.

Local Policy & Regulations

See Chapters 3.4, 3.5, 3.8, 3.9, 3.10, 3.13, and 3.17 of this document for local regulations related to Biological Resources, Cultural Resources Hazards & Hazardous Materials, Hydrology & Water Quality, Noise, and Transportation/Traffic.

IMPACT EVALUATION

Would the project:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

FINDINGS: IMPACTS TO BIOLOGICAL RESOURCES

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

Chapter 3.4, Biological Resources, addresses potential impacts to biological resources. A biological evaluation of the Project site was conducted by consultants Live Oak Associates, Inc. involving the proposed Project area. The evaluations, in their entirety, can be found in Appendix "B". The biological assessment is based upon database and literature searches, as well as a site visit. The Biological Evaluation determined that impacts on Biological Resources due to the proposed Project are potentially significant. Implementation of the Mitigation Measures will reduce any impacts to ***Less Than Significant*** through the Year 2030 Planning horizon.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley, the State of California, and the Western United States. As noted in Chapter 3.4, there will be Less Than Significant Cumulative Impacts related to biological resources with the implementation of Mitigation Measures.

Mitigation Measures:

See **Mitigation Measures 3.4-1(a)-(c)** through **3.4-7(a)-(b)** contained in Chapter 3.4.

Conclusion: ***Less Than Significant Impact With Mitigation***

Less Than Significant impacts to Biological Resources would result from the proposed Project with the implementation of Mitigation Measures through the Year 2030 Planning horizon.

FINDINGS: IMPACTS TO EXAMPLES OF THE MAJOR PERIODS OF CALIFORNIA HISTORY OR PREHISTORY

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

As indicated earlier in Chapters 3.5 Cultural Resources and 3.18 Tribal Cultural Resources, the proposed Plan Update will result in a less than significant impact within the planning horizon (Year 2030). However, as development occurs, it is possible to encounter previously unknown cultural, historical, tribal cultural, or archaeological resources. Based upon this uncertainty, implementation of **Mitigation Measures 3.5-1** through 3.**5-3** would reduce potential Project-specific impacts related to this Checklist Item to a level considered ***Less Than Significant*** through the Year 2030 Planning horizon. As noted in Chapter 3.5, this determination was based on a California Historical Resources Information Systems search, Sacred Lands File search, and Tribal consultation requests (per AB 52) are included in Appendix "C".

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project will be mitigated to a ***Less Than Significant*** level and ***Less Than Significant Cumulative Impacts*** with Mitigation Measures through the Year 2030 Planning horizon.

Mitigation Measure(s):

See **Mitigation Measures 3.5-1** through **3.5-3** contained in Chapter 3.5.

Conclusion: ***Less Than Significant Impact With Mitigation***

Less Than Significant Impacts to Cultural Resources would result from the proposed Project with the implementation of Mitigation Measures through the Year 2030 Planning horizon.

b) Does the project have impacts that are individually limited, but cumulatively

considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Project Impact Analysis: ***See Chapter 4***

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Chapter 4.

"CEQA Guidelines Section 15130(a) requires that an EIR discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. A consideration of actions included as part of a cumulative impact scenario can vary by geographic extent, time frame, and scale. They are defined according to environmental resource issue and the specific significance level associated with potential impacts. CEQA Guidelines 15130(b) requires that discussions of cumulative impacts reflect the severity of the impacts and their likelihood of occurrence. The CEQA Guidelines note that the cumulative impacts discussion does not need to provide as much detail as is provided in the analysis of project-only impacts and should be guided by the standards of practicality and reasonableness and focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impacts."[8]

Cumulative Analysis: ***See Chapter 4***

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Chapter 4.

Conclusion for Cumulative Impacts to Biological Resources (Chapter 3.4): ***Less Than Significant Impact With Mitigation***

With the implementation of **Mitigation Measures of 3.4-1(a) through (d)** through **3.4-7(a) through (b)**, potential Project specifics and cumulative impacts related to this Checklist Item will be reduced a ***Less Than Significant*** through the Year 2030 Planning horizon. Cumulative impacts are discussed within the analysis of each Checklist item. In addition, cumulative impacts are summarized in Chapter 3.4.

Conclusion for Cumulative Impacts to Cultural Resources (Chapter 3.5): ***Less Than Significant Impact With Mitigation.***

With implementation of **Mitigation Measures 3.5-1** through **3.5-3**, potential Project specifics and cumulative impacts related to this Checklist Item will be reduced to a ***Less Than Significant*** through the Year 2030 Planning horizon. Cumulative impacts are discussed

[8] Tulare County 2030 General Plan. RDEIR. Pages 5-3 to 5-4.

within the analysis of each Checklist item. In addition, cumulative impacts are summarized in Chapter 3.5.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The proposed Project will result in potential impacts to the Hydrology & Water Quality and Noise resources which could adversely affect human beings. However, the implementation of **Mitigation Measures 3.10-1** through **3.10-9** (Hydrology & Water Quality), and **3.13-1** through **3.13-8** (Noise) will reduce the proposed Project's potential impacts to a less than significant level.

As noted in Chapter 3.13 Noise, a Noise Study Report was prepared by VRPA Technologies (and is included in Appendix "D") to determine if significant noise impacts would be expected to occur as a result of the Project, and to describe mitigation. Existing noise levels shows traffic impacts to receptors to the Year 2040 (which includes the Year 2030 Planning horizon of the Community Plan). As shown in Table 3.13-1, only Receptor site 2 (Residential Development along Avenue 416, east of SR 63 (Road 128) is currently below (58 Ldn dB) and anticipated to remain below the County's noise standard (60 Ldn dB); Receptors 1, 3, and 4 exceed (62 Ldn dB) and are anticipated to remain above the County's noise standard (60 Ldn dB) to Year 2040 which is beyond the Update's 2030 Planning horizon. Therefore, there will be no noise increases and no perceivable differences of noise at all Receptor sites as a result of the Project. Future, temporary, short-term construction-related noise will result in a Less Than Significant Impact through implementation of **Mitigation Measures 13-1** through **13-8**.

Conclusion for adverse effects on human beings, either directly or indirectly to Hydrology & Water Quality (Chapter 3.10) and Noise (Chapter 3.13): The proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts*** with implementation of **Mitigation Measures 3.10-1** through **3.10-9** and **3.13-1** through **3.13-8**; respectively, related to these Checklist Items**.**

Mitigation Measure(s): ***See Mitigation Measures outlined in Chapters 3.10 and 3.13***

Conclusion: ***Less Than Significant Impact With Mitigation***

UNAVOIDABLE CUMULATIVE IMPACTS

The proposed Cutler-Orosi Community Plan 2021 Update is not anticipated to have substantial adverse effects on human beings through the Year 2030 Planning horizon. The

proposed Project will not cause substantial adverse effects on human beings either directly or indirectly.

Cumulative Impact Analysis: ***Less Than Significant Cumulative Impacts***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the draft Cutler-Orosi Community Plan 2021 Update, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or the Tulare County General Plan 2030 Update EIR.

UNAVOIDABLE IMPACTS

There are no significant and unavoidable impacts. All potentially significant cumulative impacts can be reduced below a level of significance through mitigation.

All impacts that can be effectively mitigated are listed in the **Table 4-2**.

Conclusion: ***Less Than Significant Cumulative Impacts***

There will be ***Less Than Significant Cumulative Impacts*** from this Project which will affect human beings either directly or indirectly.

DEFINITIONS/ACRONYMS

Definitions

See Chapters 3.4, 3.5, 3.10, 3.13, and 3.17 of this document for definitions related to Biological Resources, Cultural Resources, Hydrology & Water Quality, Noise, and Tribal Cultural Resources.

Acronyms

See Chapters 3.4, 3.5, 3.10, 3.13, and 3.17 of this document for definitions related to Biological Resources, Cultural Resources, Hydrology & Water Quality, Noise, and Tribal Cultural Resources.

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Sections 15064.5, 15065(a) (1)-(4), 15065(a), 15065(a)(1), 15065(a)(2), 15065(a)(4). Accessed September 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

Tulare County 2030 General Plan Update. August 2012. Accessed September 2021 at: http://generalplan.co.tulare.ca.us/documents.html.

Tulare County. (2010). Recirculated Draft. Environmental Impact Report SCH No. 2006041162. Tulare County General Plan. Accessed September 2021 at: http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf.

Tulare County. Draft 2021 Cutler-Orosi Community Plan Update. Included in Appendix "F" of this Draft EIR.

See Chapters 3.4, 3.5, 3.10, 3.13, and 3.17, Chapter 4, and Chapter 8.

Summary of Cumulative Impacts
Chapter 4

Each resource section of Chapter 3 contains a Cumulative Impacts discussion to provide the reader with an assessment of how the Program/Projects will affect each particular resource. The discussion below considers additional evaluation criteria to determine the potential cumulative impacts by the Program/Projects on all resources. Geographic region(s); past, present, and probable future projects; regional population growth; projections contained in an adopted local, regional or statewide plan, or related planning document; and mitigated impacts and ummitigable impacts were evaluated. Based on these CEQA criteria to determine cumulative impacts, it has been determined that the Projects will result in ***Less Than Significant Cumulative Impacts*** for all Resources.

CUMULATIVE IMPACTS ANALYSIS UNDER CEQA

Section 15355 Cumulative Impacts

""Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."[1]

Section 15130 Discussion of Cumulative Impacts

"(a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a) (3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

(2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly

[1] California Environmental Quality Act (CEQA) Guidelines. Section 15355. Accessed September 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.

(3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:

(1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

(2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.

(3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and

(5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

(c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

(d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section15183(j)."[2]

Tulare County is the geographic extent for most impact analysis. This geographic area is the appropriate extent because of the following reasons:

1. The proposed Project is physically located in Tulare County and the County of Tulare is the Lead Agency;
2. Tulare County General Plan polices applies to the proposed Project.
3. Goshen is an unincorporated area of the County, and as such planning staff considers all County projects and policies when evaluating projects within the County boundaries.

The basis for other resource specific cumulative impact analysis includes:

- Land Use Impacts are based on the County of Tulare 2030 General Plan, the Goshen Community Plan, (GPA 78-3A), August 9, 1978.
- For Air Quality and Green House Gas Emissions, the San Joaquin Valley Air Basin is the geographic extent.
- For Biological Resources, the geographic extent is the San Joaquin Valley floor.
- For Hydrology, the geographic extent is the Tulare Lake Basin, Tule Lake Sub-basin aquifer.

[2] Ibid. Section 15130 (e).

PAST, PRESENT, PROBABLE FUTURE PROJECTS

Tulare County Association of Governments (TCAG) Blueprint Scenario

Under the Tulare County Regional Blueprint Preferred Growth Scenario, TCAG suggested a 25% increase over the status quo scenario to overall density by 2050. The preferred growth scenario principles included directing growth towards incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are/or will be provided. Another relevant preferred scenario is the creation of urban separators around cities. The project location is outside incorporated areas and would be consistent with the goal of separating urban boundaries.[3]

Tulare County 2030 General Plan

The Cumulative Analysis outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR notes regional population growth (which impart was developed by the Tulare County Association of Governments) and a number major projects. Regional population projections are provided in the table below.[4]

Table 4-1
Regional Population Projections and Planning Efforts

Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
City of Dinuba	2006-2026	33,750	Farmland conversion; conflicts with agricultural zoning and Williamson Act contracts; conversion of agricultural soils to non-agricultural use; regional air quality impacts; and climate change-greenhouse gases.
City of Woodlake			Unavailable.
City of Visalia	1991-2020	165,000	Air quality; biological resources; land use conflicts; noise; transportation/traffic; mass transit; agricultural resources; water supply; and visual resources.
City of Tulare	2007-2030	134,910	Farmland conversion; aesthetics; water supply; traffic; air quality; global climate change; noise; flooding from levee or dam failure; biological resources; and cultural resources.
City of Farmersville	2002-2025	12,160	Agricultural resources; agricultural land use conflicts; air quality; and traffic circulation.
City of Exeter			Information unavailable at time of analysis.

[3] Tulare County Association of Governments (TCAG). Regional Transportation Plan 2018. Tulare County Regional Blueprint. Accessed September 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/tulare-county-blue-print/

[4] Tulare County. Tulare County General Plan 2030. Update Recirculated Draft Environmental Impact Report. Accessed September 2021 at: http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf.

Table 4-1
Regional Population Projections and Planning Efforts

Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
City of Lindsay	1990-2010	17,500	Air quality and farmland land conversion.
City of Porterville	2006-2030	107,300	Farmland conversion; air quality; noise; and biological resources.
City of Kingsburg	1992-2012	16,740	Farmland conversion and air quality.
City of Delano	2005-2020	62,850	Air quality; noise; farmland conversion; disruption of agricultural production; and conversion of agricultural soils to non-agricultural use.
County of Fresno	2000-2020	1,113,790	Farmland conversion; reduction in agricultural production; cancellation of Williamson Act Contracts; traffic; transit; bicycle facilities; wastewater treatment facilities; storm drainage facilities; flooding; police protection; fire protection; emergency response services; park and recreation facilities; library services; public services; unidentified cultural resources; water supply; groundwater; water quality; biological resources; mineral resources; air quality; hazardous materials; noise; and visual quality.
County of Kern	2004-2020	1,142,000	Air quality; biological resources; noise; farmland conversion; and traffic.
County of Kings*	1993-2005	149,100 (low) 228,000 (high)	Biological resources; wildlife movement; and special status species.

** The adopted Kings County General Plan did not identify a projected population for 2005. The General Plan does include population projections for 2010, which is included in this table.*

SOURCE: City of Delano, 1999; City of Dinuba, 2008; City of Farmersville, 2003; City of Kingsburg, 1992; City of Lindsay, 1989; City of Porterville, 2007; City of Visalia, 2001, 1991; County of Fresno, 2000; County of Kern, 2004; County of Kings, 2009; DOF, 2007; TCAG, 2008.

In addition to the Regional Growth Projections used for the cumulative impact analysis, the Tulare County General Plan Update 2030 Recirculated Draft EIR noted the following Major Projects

- **Goshen Community Plan:** Status – Approved. On June 5, 2018, the Tulare County Board of Supervisors (BOS) approved the Goshen Community Plan. The Goshen Community Plan Update was updated to implement the 2030 Tulare County General Plan (2012) and includes primary goals and objectives for future development for the Community.

- **Traver Community Plan:** Status – GPA approved. On December 16, 2014 the Tulare County Board of Supervisors (BOS) approved an update to the Traver Community Plan. The Traver Community Plan Update is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development for the Community.

- **Pixley Community Plan:** Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Pixley Community Plan. The Pixley Community Plan Update is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development for the Community.

- **Strathmore Community Plan:** Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Strathmore Community Plan. The Strathmore Community Plan Update is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development of the Community.

- **Tipton Community Plan:** Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved the Tipton Community Plan. The Tipton Community Plan is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development of the Community.

- **Ducor:** Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Ducor Community Plan. The Ducor Community Plan Update is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development of the Community.

- **Terra Bella:** Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Terra Bella Community Plan. The Terra Bella Community Plan Update is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development of the Community.

- **Earlimart Community Plan:** Status – GPA approved. On October 17, 2017 the County Board of Supervisors (BOS) approved the Earlimart Community Plan. The Earlimart Community Plan is consistent with the approval of the General Plan 2030 Update, and includes primary goals and objectives for future development of the Community.

- **Three Rivers Community Plan:** Status – Notice of Availability (NOA) for the Draft Environmental Impact Report (DEIR) was released for a 45-day review period starting on December 29, 1017 and ending February 12, 2018. The review period for the DEIR has been extended 30-days, from February 12, 2018 and ending March 14, 2018, which has been approved by the State of California, Office of Planning and Research.

In addition to the Major Projects outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR, there are a number of other projects that may produce cumulative impacts. These projects are briefly described below.

- **Pena's:** Status – Approved. Peña's Material Recovery Facility (MRF) and Transfer Station (TS)' which currently sits on 18.01 acres that were rezoned from AE 30 to M1 Light Industrial Zoning, and rezoned 6.7 acres and 11.3 acres from residential and industrial reserve zoning to industrial zoning. The land is currently operated by Peña's Disposal, Inc. and has a previously permitted peak processing capacity of 500 tons per day (TPD). This existing facility serves the unincorporated northern portions of Tulare County and the unincorporated southern portions of Fresno County, and the City of Orange Cove in Fresno County. Within the County of Tulare, the facility serves the cities of Dinuba and Porterville, the communities of Cutler, Orosi, London, Sultana, Traver, Seville and other smaller communities in the area that may need to utilize the facility for the recycling of source-separated recyclables, commingled recyclables, commercial and industrial rubbish, green material and wood wastes, construction and demolition wastes, and inert debris to assist in reaching the diversion goals of the California Integrated Waste Management Act of 1989 (AB 939).

- **Harvest Power:** Status – Approved. The Project is for a Composting Expansion and Anaerobic Digester. The Project allows a maximum total tonnage for the composting to increase from 156,000 tons per year to a potential 216,000 tons per year. An additional 60,000 tons will be allowed at the approved anaerobic digester facility. The facility will produce transportation fuel through a compressed natural gas (CNG) refueling station.

- **South County Correctional Detention Facility in Porterville:** Status – Approved. The approved Project sits on two parcels, one is in the County and the second is within the City of Porterville's jurisdiction. The facility will be constructed within the City of Porterville while the County's parcel will be used for agricultural purposes. The proposed project contains a build-out "footprint" for the proposed facility of approximately 15.0 acres with a new maximum security Type II facility as the primary structure. The proposed Project will consist of 250-cell double occupancy units (500 beds) and 14 special use beds for a total of 514 beds. In addition to the main detention facility, the proposed Project will also include support service components.

  As the site is currently under agricultural production, the Project will require new utilities infrastructure (such as electrical, gas, phone, etc.). It will also require streets/roads improvements, potable water systems, wastewater systems, and storm water drainage infrastructure. These will be constructed or expanded to meet facility demands. Where feasible, the Project will be extended to connect with existing potable water, wastewater, and storm water drainage infrastructure provided by City of Porterville. However, possible new construction of the above mentioned infrastructure may be necessary, and as such, will be evaluated.

- **Orosi Rock:** Status – Approved. The Project resulted in an amendment to a Surface Mining Permit and Reclamation Plan to allow for expanded operations at this site. The Applicant received approval to modify their permit conditions to include allowing year-round instead of seasonal operations and allow mining equipment to remain onsite

throughout the year. The Project also includes received approval to increase the excavation depth, increase annual maximum shipment, and increase annual truck trips.

Production will be increased by 6.8 million tons of rock. The total production of aggregate will be increased to 14.3 million tons over the existing 25 year period of the existing permit. Annual production will be a maximum of 800,000 tons of aggregate. The Project will result in 10 additional employees.

- **Colony Power Project (City of Tulare):** Status – Approved. The Project is for a co-digester project. The proposed SWFP would allow a new anaerobic co-digester operation in the unincorporated area of Tulare, California near dairy farms and the City of Tulare's waste water treatment plant. The project would utilize a variety of organic feedstocks: pre-consumer and post-consumer food waste, compostable materials, dairy manure, food processing waste, liquids wastes, and FOG (fats, oils, and grease). This process would allow for the production of biogas that may be used for utility pipeline injection and/or converted on-site to electrical and heat-energy in bio-gas fueled engine-generators to provide on-site energy. The property is owned by the City of Tulare and leased to the operator, Colony Energy Partners, an energy company based in Newport Beach, California. Approximately 500 tons of feedstock will be delivered daily to the site by truck from various sources. Digester supernatant will be piped to the City of Tulare's wastewater facility for disposal. Dewatered digestate, approximately 50 tons per day, will be trucked to permitted composting facilities.

- **Pixley Biogas:** Status - Approved. The Project is for development of a biogas facility on a 2.75 acre portion of an 8.0 acre parcel. The digester will extract methane gas via an anaerobic manure digester. The facility will be used to produce 266 MMBTUS per day of biogas via anaerobic digestion of manure feedstock from a nearby dairy. The biogas produced will be used to fuel the Calgren bio-refinery facility, located adjacent to and south of the Project site. Providing biogas to the Calgren facility will reduce Calgren's consumption of natural gas.

- **CMI Inc. (formerly Papich)**: Status – Approved. This project is located at the southwest corner of Avenue 298 and Road 68. The Applicant previously operated a temporary asphalt batch on the project site under a County-issued Special Use Permit (PSP 13-005 issued February 19, 2013). This project consists of the establishment of a permanent asphalt batch plant on the existing ±32-acre site; expansion of the existing operation from 3,700 tons/day to 8,000 tons/day of asphalt; and on-site retail/commercial sales of asphalt. Project-specific impacts were assessed in the Environmental Impact Report (EIR) prepared for the project State Clearinghouse Number 2014071069. The County Board of Supervisors approved the Special Use Permit (PSP 14-041) on July 21, 2015.

- **Goshen Village West**: - Status- Approved. The County Board of Supervisors on October 13, 2015, approved a Change of Zone (No. PZ-15-019), and Tentative Subdivision Tract Map No. 835. This Activity involves the phased development of single- and multiple-family residences, a public park, and various infrastructure improvements located in the

unincorporated community of Goshen, Tulare County, California (Exhibits 1 and 2, respectively). The Project will include one hundred percent (100%) single- and multiple-family dwelling units (89 single-family lots as part of Phases 2 and 3, and up to 140 multiple-family units as part of Phase 1) on an approximately 29 acre area. Also, an approximately 9.4 acre remainder parcel will retain its current zoning. Infrastructure improvements, such as a storm water detention basin (2.36 acres as part of Phase 1), streets, curbs, gutters, sidewalks, and water and sewer systems will also be constructed. A Class I bicycle lane, a pedestrian trail (in Phase 1), a possible transit stop, a public park (0.56 acre as part of Phase 3), and bio-swales are also part of the project. The Project site is located on an approximately 29 acre site, which will be subdivided to accommodate the uses described above.

- **Derrel's Mini Storage: –** Status- Approved. The Project included a General Plan Amendment (No. GPA 14-007) and Change of Zone (No. PZ 14-001). GPA 14-007 amended the Tulare County Land Use Element of the General Plan by changing the land use designation on the 19.33-acre parcel from "Agriculture" to "Commercial or Light Industrial". PZ 14-001 is a proposed to re-zone the AE-20 (Exclusive Agricultural-20 acre minimum) Zone to C-3 (Service Commercial) Zone on the same 19.33 acres. The proposed zone change would allow, as noted in the Tulare County Zoning Ordinance, Mini-Warehouses – "Storage or warehousing service within a building or buildings primarily for individuals to store personal effects"[5]

  The proposal for the site consists of the phased construction of 19.33 acre mini- storage facility. Phase 1 consists of 129,550 square feet; Phase 2 consists of 148,950 square feet, and Phase 3 consists of 96,600 square feet. RV storage will be used on the Phase 2 portion of the site, moving to Phase 3 as the earlier phases are constructed with the eventuality of the entire site constructed as mini storage units if necessary to meet market demands. It is possible that Phase 3 will remain as RV storage. The applicant approximates a ten year full build-out of the entire proposed Project site. It should be noted that the entire Project site perimeter will include a wall around the entire site as part of Phase 1.

- **Sequoia Drive-In Business Park:** Status – Approved. The Project includes a proposed General Plan Amendment (No. GPA 14-007) and proposed Change of Zone (No. PZ 14-001). GPA 14-007 received approval to amend the Tulare County Land Use Element of the General Plan by changing the land use designation on the 19.33-acre parcel from "Agriculture" to "Commercial or Light Industrial". PZ 14-001 was approved to re-zone the AE-20 (Exclusive Agricultural-20 acre minimum) Zone to C-3 (Service Commercial) Zone on the same 19.33 acres. The zone change allows, as noted in the Tulare County Zoning Ordinance, Mini-Warehouses – "Storage or warehousing service within a building or buildings primarily for individuals to store personal effects"[6]

[5] Tulare County Zoning Ordinance, page 13
[6] Tulare County Zoning Ordinance. Page 13.

The site consists of the phased construction of 19.33 acre mini- storage facility. Phase 1 consists of 129,550 square feet; Phase 2 consists of 148,950 square feet, and Phase 3 consists of 96,600 square feet. RV storage will be used on the Phase 2 portion of the site, moving to Phase 3 as the earlier phases are constructed with the eventuality of the entire site constructed as mini storage units (if necessary) to meet market demands. It is possible that Phase 3 will remain as RV storage. The applicant approximates a ten year full build-out of the entire proposed Project site.

- **Hash Farms Residential Subdivision:** Status – Approved. The Project will be located at the northwest corner of Road 16 and Avenue 396, partially within the City of Kingsburg, Fresno County, and Tulare County. The Hash Farms Development Specific Plan is an approved plan for development of a 200-unit residential subdivision (160 single-family units and 40 multi-family units) on a total of 54 acres, including a 2.54 acre park and 1.15 acre fenced stormwater basin. The site is approximately one-half mile east of State Route 99 and approximately one-tenth of a mile south of State Route 201. The 54-acre site is located on Tulare County APNs 028-140-007, 012, 013, 018 and 022, and Fresno County APNs 396-020-008 and 014. The County of Tulare Board of Supervisors approved a tentative subdivision map and a Specific Plan for this project. The City of Kingsburg, County of Fresno, Fresno County Local Agency Formation Commission, and Selma-Kingsburg-Fowler County Sanitation District will also need to take each agencies' respective actions.

- **Antelope Valley (Redfield):** Status – Approved. The 43-unit single-family residential Antelope Valley Subdivision is located on a ±125-acre site (with average lot size of 2.14 acres) on the north side of Avenue 360 (west side of Road 220), approximately one mile north of the City of Woodlake in Tulare County. The site is approximately five miles west of State Route 198 and twenty-two miles east of State Route 99. The site is zoned PD-F-M (Planned Development-Foothill Combining-Special Mobile Home) Zone and is within the Woodlake 7.5 Minute USGS Quadrangle.

- **Sequoia Gateway Commerce Park:** Status – Approved. The Project consists of a Specific Plan/Corridor Plan for the development of a highway commercial/regional commercial center on ±126.9 acres at the southeast quadrant of State Route 99 and Avenue 280 (Caldwell Avenue) in an unincorporated area of Tulare County. The project will be developed in two major phases. Phase 1 consists of 22,950sf of highway commercial uses such as fast-food outlets, retail, and gas station fueling pumps with associated convenience store, along with a 60,000sf medical clinic building on approximately 12.4 acres in the northwest corner of the project site. Phase 2, will consist of 986,000sf of mixed-use commercial land uses including regional retail, hotel, office, restaurant, and fast-food uses on approximately 101.6 acres. Phase 2 will be developed in at least four incremental sub-phases, including additional highway commercial uses adjacent to Phase 1, hotel and restaurant uses, office uses, and regional retail uses. The remaining 12.9 acres will be used for a planned stormwater basin and wastewater treatment plant, along with roadway rights-of-way. Project development will occur in accordance with the detailed planning and design guidelines and standards set forth in the

"Sequoia Gateway Commerce Park Specific Plan" (which is contained in Appendix A of the EIR). Phase 1 would commence development in the near-term upon approval of entitlements and permits for that initial phase of development. Phase 2 would commence development at such future time as traffic capacity permits, or after the planned reconstruction of the State Route 99/Caldwell Avenue Interchange, currently in the planning stages, is completed, and other pre-requisite criteria are met for moving forward with permitting and entitlements for that latter phase of development.

- **Derrel's Mini Storage:** Status – Approved. The re-designation of the land use and zone district for the ±15.0-acre parcel allows by-right construction of a mini-storage facility in two phases: Phase 1 – 148,500 sq. ft.; and Phase II – 175,200 sq. ft. At complete build-out, the total square footage of rentable storage space would be 323,700. The project also includes a 1,327 sq. ft. residence, a 391 sq. ft. garage, and an 804 sq. ft. office. The Board of Supervisors also approved General Plan Amendment No. GPA 17-031 and Zone Change No. PZC 18-015; (2) General Plan Amendment No. GPA 17-031 that changed the land use from "Mooney Corridor" to "Mixed Use" on one ±15.0 acre parcel; (3) Change of Zone No. PZC 18-015 that changed the zone district from AE-20 to C-2 on one ±15.0-acre parcel; (4) Categorical Exemption and General Plan Amendment No. GPA 17-036 that changed the land use designation from "Mooney Corridor" to "Mixed Use" on two 1.0-acre parcels; and (5) Categorical Exemption and Change of Zone No. PZC 17-043 that changed the zone district from AE-20 to C-2 on two 1.0-acre parcels, located on the east side of Mooney Blvd., approximately 660 feet south of Avenue 264, north of Tulare.

- **Dunn Asphalt and Concrete Batch Plant**: Status – Approved. The Applicant received approval of Special Use Permit (PSP 18-049) to operate the asphalt/concrete batch plant at 7763 Avenue 280 (Visalia, CA) which is located along the south side of Avenue 280, west of State Route 99 and east of Road 76 in an unincorporated area of Tulare County. The Special Use Permit (PSP 18-049) allows the following: 1) a concrete batch plant that would produce 100,000 tons of concrete per year for commercial and retail sale; 2) a hot-mix asphalt (HMA) batch plant that would produce 150,000 tons of HMA per year for commercial and retail sale; and 3) recycling of 30,000 tons per year of concrete and asphalt to be crushed into recycle base. The site is zoned AE-40 (Exclusive Agricultural-40 Acre Minimum); the use is consistent with the zoning with an approved special use permit.

- **Deer Creek Mine (PMR 19-001):** Status – Approved. The applicant received approval of application PMR 19-001 to expand mining operations at a currently operating a rock and gravel surface mining operation on 110 acres, as permitted by PMR 01-001, PMR 09-002, and PSP 01-055 (ZA), and PMR 14-002. Approval will ultimately result in an approximately 20-acre expansion to the footprint and increased operations of the existing and currently operational Deer Creek Mine facility. The permit amendments requested by PMR 19-001 will allow consistency between PMR 01-001, PMR 09-002, PSP 01-055(ZA), and PMR 14-002; result in an approximately 20-acre expansion through the use of a lot line adjustment toward the east and southeast on land currently

used for grazing; increase annual production by 500,000 tons per year (from a maximum of 1,000,000 tons per year to a maximum of 1,500,000 tons per year); increase truck hauling by 224 round-trips per day (from a maximum of 376 round-trips per day to a maximum of 600 round-trips per day), with a maximum of 60,000 truck trips per year; result in an increase in the maximum depth of the mine to 300 MSL; and result in a change to the estimated total rock production of 40,000,000 tons of rock to 75,000,000 tons of rock material during the estimated 50 years of operation.

- **Cross Creek Bend Subdivision (Smee Homes):** Status – Approved. At build-out, the Project would result in the development of 197 single-family residences on APN 075-440-002 at the northwest corner of Avenue 310 and Road72 within the Goshen Community Plan Urban Development Boundary area. The approximately 37.0-acre site will have a density of 5.32 units per acre (based on the gross acreage). The remaining acreage will be utilized as open space in the form of a stormwater detention basin and roadways with curbs, gutters, and sidewalks. Residential parcels will be a minimum of 5,000 square feet. The Project will be developed in three (3) phases: Phase I 33 lots, Phase II 83 lots, and Phase III 81 lots. The existing zoning is C-2-MU (Mixed use); as such, the Project is consistent with the applicable zoning which allows single-family residential uses.

- **Rexford Solar Farm:** Status – Approved. The Rexford Solar Farm Project will result in the construction and operation of an up to 700 megawatt (MW) solar photovoltaic (PV) facility, including an energy storage system (ESS) with up to 700 MW storage capacity, on site substation, transmission and/or collector lines, and ancillary components on approximately 3,614 acres of land in unincorporated Tulare County, California. The Project site consists of 40 discontinuous parcels in south central Tulare County with a complete list of the Assessor Parcel Numbers and acreages can be found in Appendix "B" of the EIR. The Project is located near the unincorporated community of Ducor; neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route (SR) 65. The majority of the existing zoning is AE-40 (Exclusive Agriculture – 40 Acre Minimum); as such, the Project is consistent with the applicable zoning which allows renewable energy projects (such as solar power electricity generation).

- **Angela Solar:** Status – Approved. The Project would provide approximately 40 megawatts (MW) of electricity (renewable energy). Project components include solar (photovoltaic, PV) modules (approximately 138,408) mounted on single access trackers. The steel piles supporting the PV modules would be driven into the soils using pneumatic techniques. Various wiring, underground cables, combiner boxes, inverters, transformers, would also be installed. A new, on-site substation/switchyard (located in the northwest corner of the Project site) would tie into a new one mile (1.0) mile-long 138-kV transmission interconnection line (along a utility easement on non-maintained County roads and private property easement) with the nearby Pacific Gas & Electric

(PG&E) Olive substation north of the Project site. The Project site is located approximately two miles southeast of Alpaugh, in Tulare County, CA, generally south and north of Avenue 42 and west and east of Road 46 and east of Road 52. The Project will cover approximately 250 acres in area. The existing zoning is AE-80 (Exclusive Agriculture – 80 Acre Minimum); as such, the Project is consistent with the applicable zoning which allows renewable energy projects (such as solar power electricity generation).

- **Hampton Inn & Suites:** Status – Approved. The Project includes the development a 3-story hotel and associated site improvements on an approximately 2.80-acre site located along the eastern side of State Route 198 (SR 198) in Three Rivers (an unincorporated area of Tulare County). The proposed Project will have one access/egress point from SR 198. A driveway road is proposed from SR 198/Sierra Drive west of the proposed Project's location within an existing 30-foot wide access easement. The hotel will consist of 105 guest rooms with an elevator, managers office, meeting room, in-house food preparation and breakfast area, and other typical hotel facilities (such as in-house and guest laundry, fitness center, various storage closets, etc.) and an outdoor swimming pool and a cabana building. The proposed Project includes 108 standard parking stalls (six (6) of which will be handicap accessible stalls). Utilities include a septic tank with filter and dripline system and new domestic well, and storm drainage will be retained on-site (with an option for biofiltration).

- **Woodville Landfill:** Status – Approved. The proposed Project includes the expansion of the existing 160-acre Woodville landfill by 240 acres; combined, the landfill would encompass an area of approximately 400 acres. The currently unused portion of the existing landfill is vacant, unproductive land, while the proposed Project expansion area is predominately under agriculturally productive row crops. The proposed Project is designed to anticipate and meet the demands/needs of increases in project solid waste disposal of the County for the next 55 years. It is anticipated that daily tonnage received, number of vehicles entering/exiting, landfill operations equipment, water usage, ancillary uses, etc., will not increase or decrease. The proposed Project site is in western Tulare County, located approximately 12 miles southeast of the City of Visalia, seven miles southeast of the City of Tulare, and 13 miles northwest of the City of Porterville at the intersection of Avenue 200 and Road 152. The landfill address is 19800 Road 152, Tulare, CA 93274. The site, and the surrounding land, is zoned as AE-40 (Exclusive Agriculture-40 Acre minimum) and has a Tulare County General Plan designation of Agriculture. The site is not located within any Urban Development Boundary or Urban Area Boundary. The landfill is an allowable use within the AE-40 zone.

SUMMARY OF CUMULATIVE IMPACTS

In this summary section, mitigated impacts and immitigable impacts will be discussed. Checklist item criteria that would result in No Impacts or Less Than Significant Impacts are discussed in Chapter 3 and are not reiterated here.

Unavoidable Impacts

There are no significant and unavoidable impacts. All potentially significant cumulative impacts have been reduced below a level of significance through mitigation.

Less Than Significant Impacts with Mitigation: **See Table 4-2**

Table 4-2
Checklist Items with Less than Significant Impacts with Mitigation

Impact Section	Checklist Item #	Checklist Criteria
Biological Resources	3.4 a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
Biological Resources	3.4 c)	Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
Cultural Resources	3.5 a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?
Cultural Resources	3.5 b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
Cultural Resources	3.5 c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
Cultural Resources	3.5 d)	Disturb any human remains, including those interred outside of formal cemeteries?
Hydrology & Water Quality	3.10 b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
Hydrology & Water Quality	3.10 c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:?
Noise	3.13 a)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
Noise	3.13 b)	Generation of excessive groundborne vibration or groundborne noise levels?
Tribal Cultural Resources	3.17 a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
Tribal Cultural Resources	3.17 b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

REFERENCES

California Environmental Quality Act (CEQA) Guidelines. Sections 15130 (e) and 15355 Accessed September 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

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ALTERNATIVES
Chapter 5

INTRODUCTION

The purpose of the alternatives analysis in an EIR is to describe a range of reasonable alternatives to the project, or to the location of the project, that could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and to evaluate the comparative merits of the alternatives (CEQA Guidelines, Section 15126.6[a]). Additionally, Section 15126.6(b) of the CEQA Guidelines requires consideration of alternatives that could reduce to a less-than-significant level or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede to some degree the attainment of the proposed project's objectives.

It is important to understand, however, that the inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The ultimate decision regarding the feasibility of alternatives lies with the ultimate decision-maker for a project, which in this case is the County of Tulare Board of Supervisors. Such determinations are to be made in statutorily mandated findings addressing potentially feasible means of reducing the severity of significant environmental effects. One finding that is permissible, if supported by substantial evidence, is that "specific economic, legal, social, technological, or other considerations . . . make infeasible the . . . alternatives identified" in the EIR (Pub. Resources Code, § 21081, subd. [a]; see also CEQA Guidelines, § 15901, subd. [a]). CEQA Guidelines section 15364 defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." In deciding whether an alternative is feasible or infeasible, a decision-making body may consider the stated project objectives in an EIR, and may balance any relevant economic, environmental, social, and technological factors. (See City of Del Mar v. City of San Diego (1982) 133 Cal.App.3d 410, 417; Sequoyah Hills Homeowners Assn. v. City of Oakland (1993) 23 Cal.App.4th 704, 715.)

Specific requirements include the following:

- CEQA Guidelines §15126.6(a): Alternatives to the proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.
- CEQA Guidelines §15126.6(b): Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially

lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

- CEQA Guidelines §15126.6(c): Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.
- CEQA Guidelines §15126.6(d): Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.
- CEQA Guidelines §15126.6(e): "No project" alternative. The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.
- CEQA Guidelines §15126.6(f): Rule of reason. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.

"15021. Duty to minimize environmental damage and balance competing public objectives

(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
    (1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
    (2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

(b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

(c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.

(d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment."[1]

EIR Contents: Energy Consumption Analysis

"Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project… Where items listed below are applicable or relevant to the project, they should be considered in the EIR… Alternatives should be compared

[1] CEQA Guidelines. Section 15021.

in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy."[2]

Factors Considered In Selection of Alternatives

The CEQA Guidelines recommend that an EIR should briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination [CEQA Guidelines, Section 15126.6(c)]. This section describes the process used in selection of the alternatives. The alternatives addressed in this draft Environmental Impact Report (DEIR) were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the proposed project;
- The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the project;
- The potential feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, and consistency with various applicable plans and regulatory limitations;
- The appropriateness of the alternative in contributing to a "reasonable range" of alternatives necessary to permit a reasoned choice; and
- The requirement of the CEQA Guidelines to consider a "no project" alternative and, where the "no project" alternative is the environmentally superior alternative, to identify an "environmentally superior" alternative in addition to the no-project alternative [CEQA guidelines, Section 15126.6(e)].

The significant environmental impacts that the County, in identifying alternatives, seeks to eliminate or reduce are:

- Transportation and circulation impacts resulting from substantial increases in vehicular traffic.
- Air quality impacts resulting from increased development and vehicular traffic.
- Noise and nuisance effects on adjacent sensitive receptor locations.
- Loss of agricultural land.
- Biological resources impacts resulting from a loss of habitat.
- Viewshed impacts resulting from increased development.
- Groundwater impacts and availability of adequate water supply resulting from increased development.

Alternatives Selection Process

The proposed project and the alternatives addressed in this chapter of the EIR are based on several ideas and concepts developed over the last three years. Staff developed the land use configurations in consultation with the Cutler-Orosi Community, affected land owners,

[2] CEQA Guidelines. CEQA Appendix F. Energy Consumption.

developers, and agencies (e.g.; Caltrans), and based on in depth CEQA, and infrastructure related analysis from the staff's public outreach process. As part of this process, several alternative land use scenarios were considered including the following:

- ***Alternative A. No Project Alternative*** **–** This Alternative would preclude the approval and implementation of the Cutler-Orosi Community Plan. Under the *No Project Alternative*, the County of Tulare would be required to make planning and capital improvement decisions based on the existing (currently adopted) 1988 Cutler-Orosi Community Plan. The 1988 Cutler-Orosi Community Plan is a collection of goals, objectives, and policies for the physical development of the community. The primary purpose of the plan was to outline community goals regarding physical development and to promote the general welfare of the communities. The plan serves as a general guide for both public and private decisions affecting the community, and provides for the overall direction, density, and type of growth consistent with the needs of the communities. As the overall Community Plan is nearly 35-years old, it is outdated and does not provide suitable directions for the public, Planning Commission, or Board of Supervisors in regards to where future growth should be directed, the alignment of new roadways, the location of various public buildings and grounds, the design of new development, and the means of financing new growth; particularly regarding the ability to qualify for public funding from agencies. Among potential funding agencies that have programs/grants available are Caltrans, San Joaquin Valley Air Pollution Control District, California Department of Water Resources, California Water Boards, Community Development Block Grants, and other agencies which require adopted plans and/or matching funds. In addition, development in the planning area would continue to be regulated by the county's zone plan for the Cutler-Orosi area. Two agricultural zones, A-1 and AE, and the RA (rural residential) zone district, pose long-term planning obstacles for Cutler-Orosi as these districts allow the creation of small lot, one-half-to-five acres in area. This type of development in and around Cutler-Orosi prevents the effective utilization of land for urban growth and conservation of agricultural land. The *No Project Alternative* will not eliminate the environmental impacts in this EIR. Population growth and urban development will still occur in the Cutler-Orosi planning area, even without adoption of an update to the Community Plan.

  Without the adoption of the Community Plan, the County of Tulare will be required to accommodate future urban development through numerous general plan amendments, zone changes, and conditional use permits. This approach to managing urban development in a community is disjointed, inefficient, does not comply with the objectives and benefits of the project in creating a sustainable, integrated, and healthy community. For these reasons, the *No Project Alternative* has been rejected by the County of Tulare.

- ***Alternative B. Proposed Land Use Plan and Expansion of UDB*** **–** Under this scenario, Community Plan Update encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler-Orosi Wastewater Treatment Plan. The Community Plan Update proposes an approximately 712.1-acre expansion to the existing Urban

Development Boundary (UDB) to approximately 3,154 acres, and amendments to land use and zoning designations. As such, the proposed Community Plan Update will expand the existing 2,441.9-acre UDB (see **Figure 3.11-3**) by approximately 29.2%, for a total UDB area of approximately 3,154.0-acres. As part of this Project, the County is adopting a change to the Zoning Code to allow a Mixed Use Zoning District consistent with the General Plan's new Mixed Use land use designation. Also, the Project would result in expansion of the Updated Plan's Urban Development Boundary to accommodate projected growth and land use needs. The Community Plan also includes a Complete Streets Program, which has been developed concurrently with this process and has been found to be in consistent with the requirements of the Complete Streets Program.

- ***Alternative C. No Expansion of UDB*** **–** Under this scenario, there would be no expansion of the current Cutler-Orosi UDB which has been in existence since 1988. This alternative would be limited to addressing land use and zoning inconsistencies. This approach is too narrow to meet the economic development objectives contained in the draft Cutler-Orosi Community Plan and would not accommodate land uses needed to further planned growth. Without expanding the UDB, the Plan fails to meet the objectives or the benefits of the Community Plan. For the reasons stated above, *Alternative C No Expansion of UDB* has been rejected by the County of Tulare.

The alternative selection process was complimented with background information from identification of community issues of concern presented by the residents of the community, in the development of several project objectives. The community outreach process was conducted to incorporate stakeholder input (in the form of workshops and meetings) at numerous public and agency outreach events. Consistent with CEQA requirements (CEQA Guidelines Section 15126.6(a)), the EIR process reviewed these scenarios and developed a range of alternatives designed to feasibly attain most of the project objectives but also avoid or lessen several significant effects associated with the proposed project.

Alternative Project Location. None of the alternatives includes consideration of an alternative location. The CEQA Guidelines (Section 15126.6(3) (f) (2)) recommend considering an alternative location to reduce potential impacts of a project. However, the goals and policies of the proposed project are specific to the geographic context of the Cutler-Orosi planning area. Build-out consistent with the goals and policies of the proposed project at another location does not make sense for a community plan that applies only to selected properties under the County's jurisdiction within the Cutler-Orosi Planning area. Thus, this EIR does not evaluate an Alternative Location alternative.

Alternatives Selected for Further Consideration

The following section provides a general description of the three alternatives considered in this analysis. Using the community workshop input identified above, these three alternatives were developed and have been determined to represent a reasonable range of alternatives which (with

the exception of "No Project" and "Existing Plan") have the potential to feasibly attain a number of the basic project objectives.

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the environmental impacts of the "No-Project" Alternative. Under this alternative current development patterns are assumed to occur in accordance with the existing General Plan, Zoning Ordinance, and the adopted (1988) Cutler-Orosi Community Plan.

Factors Considered In Analysis of Alternatives

In this Alternatives analysis the following criteria will be used:

Evaluation Criteria 1: Land Use and Environmental Planning

The primary purpose of this objective is to promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the land use and environmental planning goals of the General Plan 2030 Update.

a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
c) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

Evaluation Criteria 2: Improvements for a "disadvantaged community"

Community planning areas will be improved with quicker project processing, increased housing grant awards, and enhanced infrastructure grant awards.

a) With quicker project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously and efficiently as possible;

b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2012) General Plan Update and Housing Element; and

c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

Evaluation Criteria 3: Strengthening Relationship with TCAG

An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

POTENTIAL IMPACTS OF ALTERNATIVES

The **Table 5-1** is a generalized comparative assessment of potential impacts of the alternatives.

Table 5-1
Comparison of Alternatives

Resource Item	*Alternative A No Project*	*Alternative B Proposed Land Use Plan and Expansion of UDB*	*Alternative C No Expansion of UDB*
Aesthetics	Similar	Similar	More
Agriculture and Forestry Resources	Similar	Similar	Similar
Air Quality	Similar	Similar	Similar
Biological Resources	Similar	Similar	More
Cultural Resources	Similar	Similar	Similar
Energy	Less	Similar	Similar
Geology and Soils	Similar	Similar	Similar
Greenhouse Gas Emissions	Similar	Similar	More
Hazards and Hazardous Materials	Similar	Similar	Similar
Hydrology and Water Quality	Similar	Similar	Similar
Land Use and Planning	Similar	Similar	Similar
Mineral Resources	Similar	Similar	Similar
Noise	Similar	Similar	Similar

Table 5-1
Comparison of Alternatives

Resource Item	*Alternative A No Project*	*Alternative B Proposed Land Use Plan and Expansion of UDB*	*Alternative C No Expansion of UDB*
Population and Housing	Similar	Similar	More
Public Services	Similar	Similar	More
Recreation	Similar	Similar	More
Transportation	Similar	Similar	More
Tribal Cultural Resources	Less	Similar	Less
Utilities and Service Systems	Similar	Similar	More
Wildfire	Less	Similar	Similar
Mandatory Findings of Significance	Similar	Similar	More
Cumulative Impacts	Similar	Similar	More
Impact Reduction	Yes	Yes	Same

Alternatives A and *B* predominantly have similar impacts, which are less substantial or significant than no expansion of the UDB as proposed under *Alternative C*. *Alternatives A* and *B* scenarios, proposed land uses, and circulation plans are comparable. The environmental impacts associated with no expansion of the UDB as proposed in *Alternative C* are more substantial and significant and are inconsistent with those anticipated or analyzed in this EIR. *Alternative C* would result in more impacts than *Alternatives A* and *B* and it would not meet the economic development objectives contained in the draft Cutler-Orosi Community Plan.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As previously described, **Table 5-1** provides a summary of the anticipated impacts resulting from implementation of the alternatives compared to those identified for the proposed project. As summarized in the table, the environmentally superior alternative for this project would be *Alternative B* (Proposed Land Use Plan and Expansion of UDB). Other than the *Alternative A (No Project Alternative)*, this is the only alternative that would reduce the significance of most environmental impacts associated with the proposed Project. As described above, build-out of *Alternative C* would convert less open space and prime agricultural farmland than the proposed project. This alternative also has the potential to result in fewer impacts to water and sewer; however, it does not meet the economic development objectives of the draft Cutler-Orosi Community Plan. As such, the proposed Project is the environmentally superior alternative.

ALTERNATIVES ANALYSIS

The proposed Alternatives were analyzed based on the three evaluation criteria listed earlier. Three of the Alternatives considered would not meet all or some of the objectives of the proposed Project. The evaluation summary of each of the Alternatives is shown in **Table 5-2**.

Table 5-2
Alternatives Evaluation

	Alternative A No Project	***Alternative B Proposed Land Use Plan and Expansion of UDB***	***Alternative C No Expansion of UDB.***
1. Land Use and Environmental Planning	No	Yes	Yes and No
2. Improvements for a "disadvantaged community	No	Yes	No
3. Strengthening Relationship with TCAG	No	Yes	No

A summary of the Alternative's ability to meet each of the project objectives is provided in **Table 5-2**. Under these Alternatives, the County would continue with implementation of its existing Cutler-Orosi Community Plan as adopted, which would remain as the adopted long-range planning policy document for the Cutler-Orosi Community. Current development patterns would continue to occur in accordance with the existing General Plan, Zoning Ordinance, and the adopted Cutler-Orosi Community Plan. Consequently, these alternatives would fundamentally fail to meet the Project Objectives described above because failure to update the County's existing Cutler-Orosi Community Plan will not result in a comprehensive update to the Cutler-Orosi Community Plan's existing goals and policies to help incorporate current planning, environmental, and regulatory trends and objectives. Failure to incorporate these updated goals and policies could make it more difficult to provide the necessary planning framework that would set standards for the protection of habitats, agricultural areas, scenic landscapes and promotion of economic development opportunities. The lack of updated economic development policies or programs may also make it more difficult to promote the desired level of reinvestment within existing communities. However, it is assumed that the County would continue to coordinate and cooperate with other local agencies and organizations on a variety of relevant land management issues regardless of an update to the Cutler-Orosi Community Plan is updated.

A summary of *Alternative B's* ability to meet each of the proposed project objectives is provided in **Table 5-2**. Under *Alternative C*, the County would adopt the Plan Update that would focus growth within the proposed UDB for Cutler-Orosi. Because this alternative would include adoption of a comprehensive Update that includes updated goals and policies to transition into current planning, environmental, and regulatory trends and objectives, *Alternative B* would meet all objectives identified in **Table 5-2**. Additionally, higher levels of anticipated growth and development would help to promote the desired level of investment and reinvestment within the Plan area. *Alternative B* fully meets all of the Project objectives and provides additional

opportunities for small unincorporated communities like Cutler-Orosi to grow, address public health and safety concerns, and improve their quality of life when compared to *Alternative D*. As with all the Alternatives, it is assumed that the County would continue to coordinate and cooperate with other local agencies and organizations on a variety of relevant land use and other issues regardless of whether the Cutler-Orosi Community Plan is Update is adopted.

A summary of *Alternative C's* (No Expansion of UDB) ability to meet each of the proposed project objectives is provided in **Table 5-2**. Under *Alternative C*, the County would adopt a comprehensive update of the Community Plan that includes updated goals and policies to help incorporate current planning, environmental, and regulatory trends and objectives. *Alternative C* however; would not meet all Project objectives identified in **Table 5-2** as no UDB expansion is proposed. Lower levels of anticipated growth and development associated with this Alternative may make it more difficult to achieve the desired level of investment and reinvestment within the existing Cutler-Orosi Community Plan area. Consequently, *Alternative C* would not fully meet Project objectives that encourage additional opportunities for unincorporated communities like Cutler-Orosi to grow, address public health and safety concerns, and improve their quality of life as compared to *Alternative B*. With the absence of an expanded UDB, more growth would most likely be directed to other unincorporated communities further or south rather than within Cutler-Orosi. As with all the Alternatives, it is assumed that the County would continue to coordinate and cooperate with other local agencies and organizations on a variety of relevant land use or other issues regardless of whether the Cutler-Orosi Community Plan Update is adopted.

After this full, substantial, and deliberate analysis the recommended Project is Alternative B.

Economic, Social & Growth Inducing Effects Chapter 6

INTRODUCTION

This Chapter discusses economic, social and growth inducing effects of the Project. **Table 6-1** provides the CEQA requirements and a summary of the impact analysis.

The Cutler-Orosi Community Plan was originally adopted in 1988. Conditions in the communities of Cutler and Orosi have changed and policies and implementation strategies should be updated to address existing conditions. This Community Plan Update will be used to foster economic development by identifying opportunities for development. This Community Plan is also a part of the implementation of the San Joaquin Valley Regional Blueprint, Tulare County Regional Blueprint, Sustainable Highway 63 Corridor Plan, and the Tulare County General Plan 2030 Update.

To comply with CEQA, an Environmental Impact Report (EIR) must discuss the ways in which the proposed project could affect economic or population growth in the vicinity of the project and how the characteristics of the project could result in other activities with adverse impacts to the environment [CEQA Guidelines Section 15126.2(d)].

Specifically, CEQA Guidelines Section 15126.2 (d) states that an EIR must:

"Growth-Inducing Impact of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."[1]

Economic growth refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic and population growth can be induced in a number of ways, including through the elimination of obstacles to growth, or through the stimulation of economic activity. Elimination of obstacles to growth refers to the extent to which a proposed project removes infrastructure limitations or removes regulatory constraints that could result in

[1] CEQA Guidelines Section 15126.2(d).

growth. For example, an increase in the capacity of utility or road infrastructure that is installed as part of the proposed project could allow either new or additional development in the surrounding areas. Increases in the population may tax existing community service facilities, requiring new facilities, the construction of which could cause potentially significant environmental impacts.

"The San Joaquin Valley faces major challenges. One concerns how to handle future growth. Population in the Valley is expected to nearly triple by 2050, from 3.6 million to 9.4 million people, the equivalent of adding 11 new towns the size of Fresno to the area. Tulare County is expected to grow to over 1,000,000 residents by 2050, well over doubling its current population[2]. This population growth will place increasing pressure on our Tulare County's unique and fragile environment along with our transportation system."[3]

Table 6-1
Summary of Economic, Social and Growth Inducing Impacts

Topic	Summary of Impact	CEQA Requirement
Economic Impact	The proposed Project will not result in negative impacts to the region. As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. As development occurs through the Year 2030 Planning horizon, the Project will result in increases in economic benefits to the region over time. Ultimately, the Project will result in temporary construction-related jobs and permanent jobs in retail, highway commercial, services, and light industrial sectors. Overall, the proposed Project will result in employment of additional persons.	CEQA does not have specific requirements for evaluating the economic impacts of a proposed project. Section 15131 of CEQA Guidelines states that "Economic or social information may be included in an EIR or may be presented in whatever form the agency desires."
Social Impact	The proposed Project will not result in a disproportionate effect on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.	The social impacts of a Project include environmental justice considerations. California Government Code Section 65040.12 defines Environmental Justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies."

[2] Tulare County Association of Governments (TCAG). Regional Transportation Plan 2018. Tulare County Regional Blueprint. Page 7. Accessed August 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/tulare-county-blue-print/.
[3] Ibid.

Growth Inducing Effect	The proposed Project will not result in significant growth inducing impacts. The intent of the Project is to provide opportunities, such as Mixed-Use land use designations, to stimulate economic development to meet the needs of existing and future community and nearby residents. Development along the State Route 63 Corridor is anticipated to capture local and pass through traffic. As such, the Project will not result in new housing. Growth inducing impacts will be Less Than Significant.	CEQA Guidelines § 15126 (d) makes recommendations for analyzing impacts due to growth inducement, including discussing ways in which the project could foster economic or population growth, the construction of additional housing, or other factors which could remove obstacles to population growth or encourage and facilitate other activities which could impact the environment individually or cumulatively.

Therefore, implementation of the proposed Project will result in a ***Less Than Significant Impact***, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

ENVIRONMENTAL SETTING

"Tulare County has one of the highest rates of unemployment in California and the nation, due in large part to the seasonal nature of agricultural employment. Employment figures for Tulare County are released by the California Employment Development Department (EDD) in the monthly Labor Force Report. The most recent unemployment figures available (December 2014) reveal a national unemployment rate of 7.3%, 9.0% for California, and 13.6% for Tulare County."[4]

"Approximately 25 percent of the County's population lives under the poverty level. A comparison between poverty levels from 1990 and 2000 (Table 3-12 [of the Housing Element]) shows overall the County' poverty level has remained constant. However, upon closer investigation, poverty levels have dropped in ten communities: Ducor 8.6%; East Porterville 3.8%; Ivanhoe 17.9%; Pixley .8%; Poplar Cotton Center 0.3%; Richgrove 2.6%; Springville 20.50%; Tipton 7%; Traver 8.5%; and Woodville 5.2%. However, Tulare County's rural communities continue to have lower incomes and a higher level of poverty overall as demonstrated in Table 3-12 [of the Housing Element]"[5]

Severely Disadvantaged Community

"Public Resources Code 75005, subsection (g) states that a "[d]isadvantaged community" means a community with a median household income less than 80% of the statewide average. "Severely disadvantaged community" means a community with a median household income less than 60% of the statewide average."

In 2017, Cutler's median household income was $31,939 and Orosi's median household income was $35,798, whereas the State of California's median household income was $67,169. Median

[4] Tulare County Housing Element 2015 Update. Page 3-11. Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015.pdf

[5] Ibid.

household income for Cutler was 47.5% and Orosi median household income was 53.3% of the State of California's median household income, and therefore considered severely disadvantaged communities."[6]

As indicated in the Community Plan Update, "According to the California Department of Finance, the 2013-2017 American Community Survey (see Table 11 [of the Plan Update]) indicated that 39.7% of all families living in Cutler lived below the poverty line and 24.3% of all families in Orosi lived below the poverty line. For all people Cutler (47.5%) and Orosi (25.7%) had a higher level of poverty compared to Tulare County at 27.1% and the State of California at 15.1%. The highest differential was the poverty rate of persons under 18 years. Poverty rate for persons under 18 years for Cutler was 61.6% and Orosi was 46.0% compared to 36.2% for Tulare County and 20.8% for the State of California.[7]

Cutler's and Orosi's occupation distribution for the civilian employed population 16 years and over is shown in **Table 6-2**. For Cutler, Management, professional, and related occupations make up almost 17%; Agricultural-related occupations make up almost 20%; while Service occupations make up almost 20%; Sales and office occupations make up 23%; and Production, transportation, and /material moving occupations make up almost 26.). Specific figures for Orosi were not available at the time of publication. However, 2019 Employment by Occupation data for both Cutler and Orosi are available as shown in **Tables 6-3** and **6-4**.

Table 6-2
Cutler-Orosi Occupation Distribution

Occupation	Cutler CDP, California		Orosi CDP, California	
	Number	Percent	Number	Percent
Management, professional, and related occupations	259	12.68	UA	UA
Service occupations	126	19.77	UA	UA
Sales and office occupations	250	23.01	UA	UA
Natural resources, construction, and maintenance (includes faming-related)	738	19.85	UA	UA
Production, transportation, and material moving	540	25.66	UA	UA

Note: UA = Unavailable.
Source: 2010 U.S. Census. Accessed August 2021 at: https://data.census.gov/cedsci/profile?g=1600000US0617708

[6] Draft Cutler-Orosi Community Plan 2021 Update. PDF Page 29.
[7] Ibid. 44

Table 6-3
2019 Employment by Occupation - Orosi

Occupation	Number	Percentage
Farming, Fishing & Forest	513	18.50
Health Care & Social Assistance	280	10.10
Office & Administrative Support	280	10.00
Construction & Extraction	238	10.10
Health Diagnosing & Treating Practitioners & Other Technical	179	6.45
Installation, Maintenance, & Repair	168	6.06
Production	168	6.06
Building & Grounds Cleaning & Maintenance	160	5.77
Material Moving	148	5.34
Management	144	5.19
Sales & Related	133	4.79
Food Preparation & Serving Related	121	4.36
Transportation	97	3.50
Education Instruction & Library	52	1.87
Business & Financial	49	1.17
Personal Care & Services	27	0.97
Legal	17	0.06
TOTAL	2,747	100 (rounded)

Source: DataUSA: Orosi, CA. Accessed August 2021 at: https://datausa.io/profile/geo/orosi-ca/#economy

Table 6-4
2019 Employment by Occupation - Cutler

Occupation	Number	Percentage
Farming, Fishing & Forest	738	38.60
Material Moving	358	18.70
Sales & Related	152	9.50
Production	143	7.48
Management	136	7.11
Office & Administrative Support	98	5.12
Education Instruction & Library	60	3.14
Health Technologies & Technicians	53	2.77
Transportation	39	2.04
Building & Grounds Cleaning & Maintenance	21	1.11
Health Care Support Services	21	1.11
Law Enforcement	13	0.68
Agriculture & Engineering	10	.005
TOTAL	1,842	100 (rounded)

Source: DataUSA: Orosi, CA. Accessed August 2021 at: https://datausa.io/profile/geo/orosi-ca/#economy

The lack of economic opportunities can have significant land use implications. Low incomes are a major source reason for the depressing housing conditions in the area and a primary cause for the number of second and third dwelling units in the single family residential areas. The lack of

economic opportunity is also a reason for the deteriorating conditions of rural commercial areas.

The draft Plan Update includes a comprehensive economic development strategy intended to reduce barriers to economic development (that is, infrastructure, use permits, education, and home occupation barriers) and marketing strategy which includes place, price, product, promotion, and a development suitability analysis. To improve incomes and to provide greater stability in its economic base, nonagricultural industries, or less seasonal agricultural support industries that provide higher wages and year-round employment are needed.

As noted in Chapter 3.10 Land Use and Planning, the existing Urban Development Boundary contains approximately 2,442 acres. "With the existing 2,441.9 acre Cutler-Orosi Urban Development Boundary, approximately 1,246 acres are urbanized. By dividing the estimated 2030 population of 15,440 by 1,246 urbanized acres, a ratio of 12.39 persons per urbanized acres is calculated. The forecasted increase in population from 2017 to 2030 is 1,830 persons. Projecting this ratio into the future (1,830 persons divided by 12.39) suggests that an additional 148 acres will be needed by the year 2030."[8]

"The Community Plan Update encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler-Orosi Wastewater Treatment Plant. The Community Plan Update proposes approximately 712.1-acre expansion to the existing Urban Development Boundary (UDB), and amendments to land use and zoning designations. As such, the proposed Community Plan Update will expand the existing 2,441.9-acre UDB (see Figure 26 [in the draft Plan Update]) by approximately 29.2%, for a total UDB area of approximately 3,154.0-acres."[9]

ECONOMIC IMPACTS

Under CEQA Guidelines 15131, "Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.

(a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

(b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the

[8] Op. Cit. 177.
[9] Op. Cit.194.

disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

(c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project."[10]

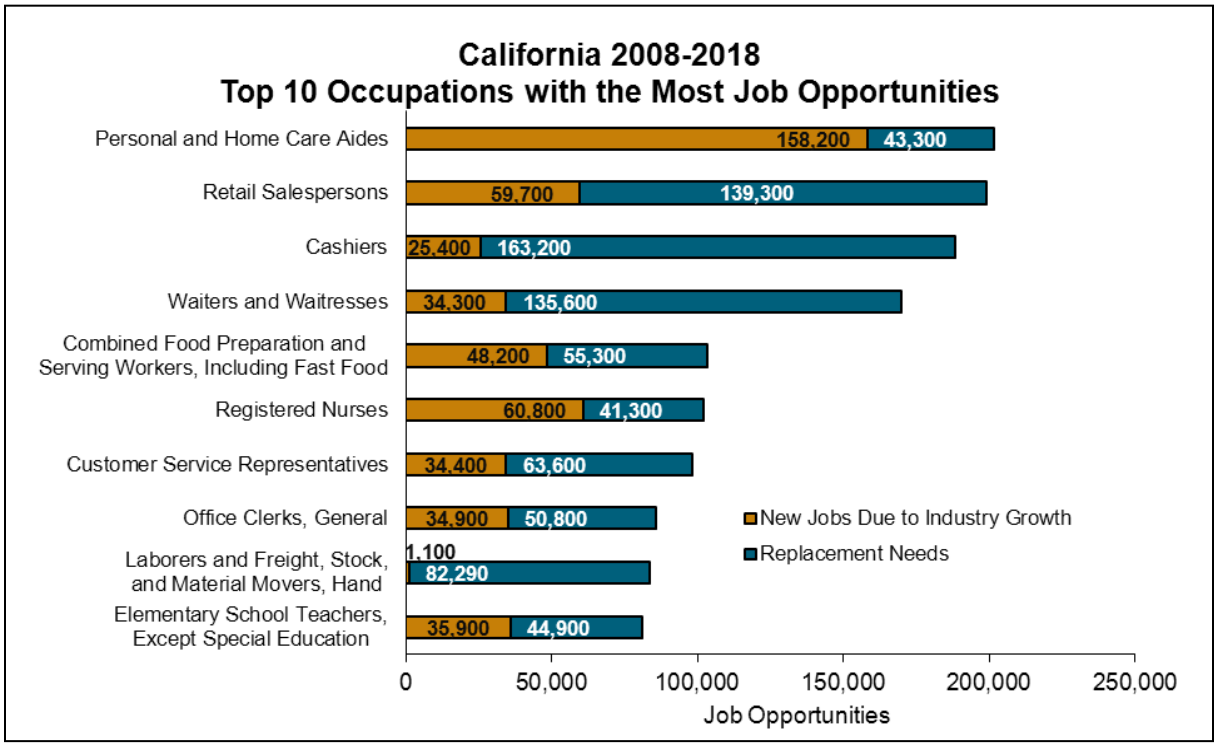
ECONOMIC BENEFITS OF PROPOSED PROJECT

Employment Projections California

"By the end of the 2008-2018 projection period, total nonfarm employment in California is projected to grow to nearly 16.5 million jobs. This exceeds peak job level of just over 15.2 million jobs reached before the Great Recession by over 1.2 million jobs. From June 2007 to June 2009, 1.1 million jobs were lost (not seasonally adjusted). Over the 2008-to-2018 projections period, nonfarm employment is expected to rebound by 1,511,100 jobs as the economy recovers from these recessionary job losses. More than 50 percent of all projected nonfarm job growth is in education services (private), health care, and social assistance, and professional and business services. The largest number of new jobs is expected in education services, health care, and social assistance, with a gain of more than 421,000 jobs.

Factors fueling the economic recovery in California include the state's population growth and a rise in foreign imports and exports…The state's population increased by more than 3.3 million from 2000 to 2010 and the California Department of Finance projects the population will increase by another 4.3 million from 2010 to 2020. A steady increase in foreign imports and exports has strengthened the wholesale, retail, and transportation industry sectors."[11]

[10] CEQA Guidelines. Section 15131.
[11] Draft Cutler-Orosi Community Plan 2021 Update. Page 41.



Tulare County's Local Economy

"Similar to the broader Central Valley area, Tulare County's economy has been largely based on agriculture, food processing, and manufacturing, while professional services jobs have been limited. Tulare is the second most productive agricultural county in a State that itself is by far the most productive in the nation. Overall, agribusinesses produced $5 billion in commodities in 2008 with the County considered one of the largest milk producers in the United States.

Tulare County is also a major distribution hub because of its central location in the State, 200 miles north of Los Angeles and 225 miles south of San Francisco. The County's employment base has been significantly impacted by the recent downturn with unemployment increasing to 18.3 percent in January 2010, significantly above the historic range of between 8.5 and 18.2 since 1990. In 2008, the median household income was approximately $44,000.

The county's major employers are Tulare County government, Porterville Development Center, 2 Kaweah Delta Healthcare, and Ruiz Food Products, as shown in Table 3-14. The top 20 employers combine for about 19,300 jobs, or 11 percent of the overall county employment. The major distributors include Jo-Ann Fabrics, VF Distribution, Wal-Mart, and Best Buy Electronics that combine for nearly 3.5 million square feet of distribution space. The county's overall industrial market includes about 23 million square feet of building space."[12]

[12] Ibid. 42.

Existing Businesses

"According to the U.S. Business Directory, there were 90 existing businesses in the Cutler area in 2018, http://us-business.info/directory/cutler-ca/ (see Table 36 [in the Plan Update, **Table 6-5** in this Draft EIR]) and 186 existing businesses in the Orosi area http://us-business.info/directory/orosi-ca/ (see Table 37 [in the Plan Update, **Table 6-6** in this Draft EIR])."[13]

Table 6-5
Existing Businesses in Cutler (2020)

99 Cents Plus Store	Cutler Orosi Waste Water	Ledbetter Park	St. Mary's Religious Education CCD
Abby's Video & Deli	E R Holden & Sons	Lovell Continuation School	T Rod INC
Aden Market	El Progreso	M I Salon	Tulare County Child Care
Arnold Trucking	El Ranchero Perez	Magnolia Market	Tulare County Fire Department
Avila's Tires	Family Healthcare Network	Martinez Accounting	Tulare County Sheriff's Office
Awasthi, Sarvamitra, MD	First Southern Baptist Church	Mini Fashions Outlet	Twin Girls Farms
Baba, Steven, DDS	Fresco Market Place	Monterey Water Company	US Post Office
Barsamian Farms	George Brothers Ranch Shop	Mulholland Citrus	Valero
Big Discount Store	Golden Sierra Cold Storage	Mundi Diesal	Warren & Baerg Manufacturing INC
Birreria	Golden Star Citrus	Nacho Auto Repair	Wawona Garage & Machine Shop
Birrieria Apatzingan	Golden State Vintners	O&R Trucking	Wawona Packing
C & E Ananian	Green Luck Landscape & Maintenance	Pacific Trellis Fruit	Western Farm Service INC
Christian Worship Center	HB Gills INC	Pena's Auto Sales	
Comp Tek	J & L Tree Service	Pena's Recycling Center	
Crop Production Service	J V Farm Labor Service	Phil's Lock & Key	

Table 6-5 Existing Businesses in Cutler (2020)			
Cutler Liquor	Jaime Lisa A (MA)	Panaderia Esesarte	
Cutler Child Care Center	Junior's #2 Fashion	Rene G Ortega Concrete	
Cutler Market		Rosewood Villas	
Cutler Bakery	Karon's	Rubalcaba Grocery	
Cutler Orosi Senior Center	Kathy Ruvalcaba	Ruvalcaba Meat Market	
Cutler School	Kathy's Style Shoppe	Saint Mary's Parish Hall	
Cutler Supermarket	Kaweah Container INC	Shell	
Cutler Orosi Unified School District	LA Esperanza	St. Mary's Catholic Church	
Cutler PUD	LA Fiesta Food		

Table 6-6 Existing Businesses in Orosi (2020)			
1st Baptist Church	Cevallo's Bakery	Gil's Auto Wrecking	McDonalds
99 Cents & More	Citricove Orchards	Golden Valley School	McPhaill Citrus Ranch
A & Engraving	Cutler Orosi Unified SCHL District	Golden Villa Mini-Mart	Mickie's Hair Salon
A S Oriental Seafood Market	CSET	Glenn's Orosi Mini Storage	Monterey Water Company
Abe-EL Produce	Cutler Orosi Special Education	Golden West Labor	Midway Auto Parts
Abel Sahagun Insurance	Cutler Rexall Pharmacy	GSF Nut Company	Mountain View AG Services INC
Academy West Insurance Services INC	Cuts N Styles	Gonzalez Serge	N & R Transportation
Agrape Christian Superstore	Davila Memorials & Granite Works	Good Choice Insurance Service	Nakatsuchi Hirofumi DDS
Allied Insurance	Diana's Daycare	Green Valley Medical Clinic	Navarro, Isaac R
Aleman 99 Cents Y Mas	Dollar Store & More	Gonzalez, Anna M. MD	Nava Smog
Aguilar, Valerie (MA)	Doneright Electricians	Green Medical Caregiver	Novedandes Nana
Alejandra Flowers	East Orosi	Guevara's PM	Orlopp Turkey

Table 6-6
Existing Businesses in Orosi (2020)

	Community Service District	Roofing Co.	Breeding Farms
Aldaz Pedro	East Orosi Market	H & R Block	Orosi Auto Repair & Tire Service
Alta Vista Apartments	Ecology Sound Farms	Happy Apple Co	Orosi Barber Shop
Amigos Transmission & Auto Repair	El Cesar	Hong Kong Chop Suey	Orosi Branch Library
Aleman Clothing	El Lago	Iglesia Ni Christo-Church	Orosi Center
Angie's Beauty Salon Alta Vista Apartments	El Mexicano-Soccer Accessories	Ikard & Ikard	Orosi Food Mart
Arturo's Portable Toilet Service	El Monte School Office	JL Recycle Center	Orosi Family Medical Care
Augies Farm Labor Service	El Pio Pio Restaurant	K & K Market	Orosi Flowers N More
Auto Title Experts	El Progreso Tortilleria	Kaleka, Virender S. MD	Orosi Donuts
Bank of the West	El Rincon Market	Kaspian's Liquor	Orosi ER Dental Center
Bay Area P O S	Faith Bible Church of God	Kay Bee Farm	Orosi MH Estates
Bayardo, Carlos, MD	Family Dollar	Kwick Korner	Orosi Mart & Deli
Beneje's Drive In	Family Health Care Network	La Bonita Supermercado	Orosi Medical Supply
Big O Gas & Deli	Fancher Creek Packing	La Mexicana	Orosi High School
BHK Nut Corp	Farm Labor Contractor	Lara's Meat Market	Orosi Urgent Care CTR Medical
Butler Ranches	First Baptist Church	Lawson Packing	Orosi Swap Meet
Boss Concrete	Freedom Transport	Leon Service Station	Orosi Public Utility District
Calvary Temple	Gabriel's Auto Mechanic	Little Caesars Pizza	Orosi Mini Mart
Camilo Galacgac	Galindo Electric	Lopez, Aileen J, MD	Orosi Pizza House
Cely's Beauty	Garcia Window Screens	M & G Farms	Orosi Wireless
Centro Cristiano Vida Abundante	Giannandrea Rita	Madrid George	P Marquez Enterprises
Palm Elementary School	Papich Construction Co.	Paramount Citrus	Pop's Propane SVC

Table 6-6 Existing Businesses in Orosi (2020)			
R-N Market	RBM Industries	Rising C Ranches	Rose City Transportation
S & J Ranch INC	Saint Germain	Sal's Tobacco & More	Salon Expressions
Sanchez, Alma R. DDS	Sequoia Presbyterian Church	Sand Creek Apartments	Secera Vending
Sequoia View Apartments	Seventh-Day Adventist Church	Smart Money	Singh, Gurteg, DDS
Sierra Pacific Materials	St Germain Botanicals	Suarez, Boris M	Super 7
Subway	Taqueria Santa Fe	Templo De Jesus	Templo La Paz Mennonite Brethern
The Car Wash	The Saul-on	Tulare County Child Care	Trevino Construction
Trevino & Son Farm Labor	Town & Country Christian School	Tulare 2010 Community LP	U-Haul
United Pentecostal Church	US Post Office	VM Logistics	Valero Cristina MD
Valley Smog	Velozz Communication	Video Castle	Villa De Guadalupe Apts
Vidrio, Maria	W & E Electric Service	Wawona Garage & Machine Shop	YR Pizza Planet
Z's Communication			

Unemployment in Tulare County

"According to the 2030 Update of the Tulare County General Plan, Tulare County's economy has historically been driven by agriculture and has had one of the largest agricultural outputs of any county in the US. Nearly 20% of the employment in Cutler-Orosi is agriculturally related according to the Tulare County Housing Element. Despite this, the Tulare County unemployment rate has remained consistently higher than the State average, which can be largely attributed to the seasonal nature of agricultural production.

According to the California Department of Finance, the 2013-2017 American Community Survey (see Table 9) indicated that the unemployment rate in Cutler was 13.1% and Orosi had an unemployment rate of 20.0% while Tulare County's unemployment rate was 10.0%. The State of California's unemployment rate was 7.7%."[14]

[14] Op. Cit. 43.

Table 6-7 American Community Survey: Unemployment 2013-2017			
Geography	**Population**	**Total Civilian Labor Force**	**Unemployment Rate Percent**
California	38,982,847	19,485,061	7.7
Tulare County	458,809	193,225	10.0
Cutler CDP	3,789	2,208	13.1
Orosi CDP	7,760	3,334	20.0
State of California Department of Finance.			

Employment Projections Tulare County

Table 13 [**Table 6-8** in this DEIR] presents a summary of the employment projections for Goshen for 2042 which were provided by TCAG. "[15]

Table 6-8 Population and Employment Projections, Tulare County 2015 to 2042						
Year	**2020**	**2025**	**2030**	**2035**	**2040**	**2042**
Population	488,293	514,101	541,140	568,186	594,348	604,969
Employment	181,560	190,344	199,344	207,912	216,696	220,210
Source: Tulare County Association of Governments. Tulare County Demand Forecast Model, 2015.						

SOCIAL EFFECTS

Environmental Justice

On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898, titled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The executive order specifies, "To the greatest extent practicable and per□mitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands[16] The basis for environmental justice lies in the Equal Protection Clause of the U.S. Constitution, wherein, the Fourteenth Amendment expressly states the following: "No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States;

[15] Tulare County Association of Governments (TCAG). 2018 Regional Transportation Plan. Action Element. Page B-13. Accessed August 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/action-element/

[16] Federal Register VO. 59. No. 32. Wednesday, February 16, 1994. Presidential Documents. Title 3. The President. Executive Order 12898 of February 11, 1994. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Page 1. Accessed August 2021 at: https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf

nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws."[17]

Low-income and Minority Populations

The draft Plan Update contains various demographic information that was considered in order to develop a plan that addresses all segments of the community. As noted in the Community Plan; "In 2017 (see Table 8[of the Community Plan]), 1.6% of Cutler's and 3.3% of Orosi's population were white. Approximately 98.8% of Cutler and 85.58% of Orosi were Hispanic (of any race). Between 2000 and 2017, the proportion of the White population declined in both Cutler-Orosi; from 34.5% to 1.6% and in Cutler, and from 48.4% to 3.3% in Orosi. During this time, the African American population declined in both Cutler and Orosi. The Asian population percentage increased in Orosi from 0.8% to 10.6%, and declined in Cutler from 0.8% to 0.0%. The two or more race demographic declined in both communities, from 4.5% to 0.0% in Cutler, and 5.5% to 0.6% in Orosi. The Hispanic (of any race) increased from 92.1% to 98.8% in Cutler, and increased from 77.6% to 85.5% in Orosi."[18] As evident, the Hispanic community represents the largest of any ethnic/racial group in Cutler-Orosi. Further, "Mean and Median income (see Table 10 [in the draft Plan Update]) in Cutler-Orosi is very low compared to Tulare County and the State of California. Average median household income for Cutler was $31,939 and Orosi was $35,798 compared to $44,871 for Tulare County and $67,169 for the State of California."[19]

The Project site is located within a disadvantaged community (as defined by E.O. 12898). As noted in Chapter 3.11 Land Use and Planning, existing uses surrounding Cutler include agriculturally productive lands to the south, west, and east; and vacant lands and scattered rural residences. Orosi is also located approximately 0.5 mile north of Cutler. Existing uses surrounding Orosi include agriculturally productive lands to the north, west, and east, vacant lands and rural residential uses are also located toward the east. Cutler is located approximately 0.5 miles south of Orosi, the unincorporated community of East Orosi is located approximately 0.75 miles east of Orosi. There are no known housing for migrant farm workers is located within a mile of the Project vicinity.

The Plan Update (see pages 176-183) contains many goals, objectives, and policies specific to Cutler-Orosi. Housing-related goals, objectives, and policies that are intended to provide housing opportunities (including for low and moderate income residents) are contained on pages 180-181 of the draft Plan Update. As indicated in the draft update, the overall Goal is to "Provide safer and adequate housing for all citizens within the community."[20] The Objectives of this Goal are intended to reduce deficiencies in the existing housing stock, encourage new housing construction within the community to meet the needs of low and moderate income residents, and provide a role for mobile homes in satisfying community needs.[21] Policies would strive to eliminate blight; expand affordable housing opportunities; inform potential rehabilitators of

[17] U.S. Constitution. Amendment XIV. §1
[18] Draft Cutler-Orosi Community Plan 2021 Update. Page 40.
[19] Ibid. 43.
[20] Op. Cit. 167.
[21] Op. Cit. 166-167.

substandard housing that incentives; ensure that there are adequate sites and will work with the Cutler PUD and Orosi PUD and other agencies to ensure that there are adequate public facilities to support future housing needs; work diligently towards the rehabilitation of the housing stock; enable the housing industry to proceed with construction in a timely and cost-efficient fashion (including adequate amounts of residential zoning); allow for development of mobile home parks in appropriate locations, etc. (see the draft Plan Update at pages 180-181).. Therefore, updating the Cutler-Orosi Community Plan will not adversely impact low-income and/or minority populations.

"Unemployment in Tulare County

According to the 2030 Update of the Tulare County General Plan, Tulare County's economy has historically been driven by agriculture and has had one of the largest agricultural outputs of any county in the US. Nearly 20% of the employment in Goshen is agriculturally related according to the Tulare County Housing Element. Despite this, the Tulare County unemployment rate has remained consistently higher than the State average, which can be largely attributed to the seasonal nature of agricultural production.

According to the California Department of Finance, the 2013-2017 American Community Survey (see Table 9 [of the Plan Update, **Table 6-9** in this Draft EIR]) indicated that the unemployment rate in Cutler was 13.1% and Orosi had an unemployment rate of 20.0% while Tulare County's unemployment rate was 10.0%. The State of California's unemployment rate was 7.7%."[22]

Table 6-9
American Community Survey: Unemployment 2013-2017

Geography	Population	Total Civilian Labor Force	Unemployment
California	38,982,847	19,485,061	7.7%
Tulare County	458,809	193,225	10.0%
Cutler CDP	5,850	2,208	13.1%
Orosi CDP	7,760	3,334	20.0%

Source: California Department of Finance

[22] Op. Cit. 43.

Income

"Mean and Median income [see Table 10 [of the Plan Update], **Table 6-10** in this Draft EIR]) in Cutler-Orosi is very low compared to Tulare County and the State of California. Average median household income for Cutler was $31,939 and Orosi was $35,798 compared to $44,871 for Tulare County and $67,169 for the State of California. The mean family income for Cutler was $32,501 and Orosi was $40,839 compared to $65,927 for Tulare County and $106,970 for the State of California. Average per capita income for Cutler was also low at $8,436 and Orosi was $12,163 compared to $18,927 for Tulare County and $33,128 for the State of California."[23]

Table 6-10
2012-2017 American Community Survey: Income

Geography	Median household income	Mean household income	Median family income	Mean family income	Per capita income
California	$67,169	$96,104	$76,975	$106,970	$33,128
Tulare County	$44,871	$62,325	$47,280	$65,927	$18,927
Cutler CDP	$31,939	$36,990	$30,760	$32,501	$8,436
Orosi CDP	$35,798	$46,444	$41,379	$40,839	$12,163

Source: California Department of Finance

Poverty

"According to the California Department of Finance, the 2013-2017 American Community Survey (see Table 11 [in the Plan Update, **Table 6-11** in this Draft EIR]) indicated that 39.7% of all families living in Cutler lived below the poverty line and 24.3% of all families in Orosi lived below the poverty line. For all people Cutler (47.5%) and Orosi (25.7%) had a higher level of poverty compared to Tulare County at 27.1% and the State of California at 15.1%. The highest differential was the poverty rate of persons under 18 years. Poverty rate for persons under 18 years for Cutler was 61.6% and Orosi was 46.0% compared to 36.2% for Tulare County and 20.8% for the State of California."[24]

Table 6-11
2012-2017 American Community Survey: Poverty

Geography	All Families	Married couple families	Families with female householder, no husband present	All people	Persons under 18 years
California	11.1%	6.6%	26.0%	15.1%	20.8%
Tulare County	23.0%	15.4%	42.2%	27.1%	36.2%
Cutler CDP	39.7%	27.7%	52.0%	47.5%	61.6%
Orosi CDP	24.3%	21.3%	29.9%	25.7%	46.0%

Source: California Department of Finance

Affordable Housing

[23] Op. Cit.
[24] Op. Cit.

As County Policies require contiguous development and an orderly extension of services, the recommendation not to amend the location of the existing UDB not only satisfies development suitability requirements, but also provides the requisite area needed to meet forecast land demand in the Cutler-Orosi Community.

"Affordability problems occur when housing costs become so high in relation to household income. Households that have to pay an excessive proportion of their income for housing, or are unable to afford any housing and are homeless are impacted by housing affordability problems. A household is considered to be overpaying (or cost burdened) if it spends more than 30% of its gross income on housing. Severe overpayment occurs when a household spends more than 50% of income on housing. Housing costs depend upon many variables, including the type, size, value and/or location of the housing units, the intended tenure of the unit (whether it is to be occupied by owners or renters), and the inclusion or exclusion of one or more utilities, services, property taxes, insurance, and maintenance.

The 2010 Census indicates that overpayment remains a critical problem for low and moderate-income households, who are disproportionately affected by this burden compared to other households. Data for the unincorporated areas of Tulare County for the Table 3-14 [in the Housing Element] below was calculated using 2010 Census figures for renters from Census Table H73 "Household Income in 1999 by Gross Rent as a %age of Households" and for homeowners from Census Table H97 "Household Income in 1999 by Selected Monthly Owner Costs as a %age of Household Income in 1999". Household information for the incorporated cities was subtracted from information for the total county to obtain results for the unincorporated area. Households in the unincorporated area of Tulare County that overpay for housing are shown by tenure in Table 3-14 [in the Housing Element].[25]"

"In general, overpayment disproportionately affects lower income households, as shown in Table 3-15. While some higher income households may choose to spend greater portions of their income for housing, the cost burden for lower income households reflect choices limited by a lack of sufficient affordable housing opportunities. These households have a higher percentage of housing problems and a greater cost burden than other households. As noted below, the housing cost burden increases as income decreases - 37% of low income households (with income between 50% and 80% median family income), 61% of very low income households (with income between 30% and 50%) and 75% of extremely low income households (with income less than 30% of median family income) spend more than 30% of household income for housing in Tulare County as a whole. Lower income households who are overpaying for housing frequently have insufficient resources for other critical essentials, such as food and medicine. This is a significant hardship for many workers, families and seniors, but also impacts local

[25] Tulare County Housing Element 2015 Update. Page 3-21. Accessed August 2021 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015.pdf

economies, since money that might otherwise be spent in local stores generating sales tax revenues is being spent on housing."[26]

As noted in the Plan Update, "The community of Cutler has a median income of $31,939 and Orosi medium income is $35,798, which is less than 80% of the State median income of $67,169. Approximately 55% of the households in Cutler and 47.0% of the households in Orosi spend 52.69% or more of their income on housing. As such, there is a high need for affordable housing. Moreover, 63.9% of Cutler's renters and 68.2% of Orosi's renters spent over 35% or more of their income on rent. Average household size of renters was 5.34 for Cutler and 3.82 for Orosi's. In addition, 29.9% of Cutler's owner-occupied units and was 53.0% for Orosi spent over 35% or more of their income on mortgages. Average household size of owner-occupied units was 3.68 for Cutler and was 3.91 for Orosi."[27].

Renter Affordability

"According to the US Census Bureau, the 2013-2017 American Community Survey (see Table 34 [of the Plan Update, **Table 6-12** in this Draft EIR]) data indicated that in 2017 the cost of rent in Cutler-Orosi was lower than in Tulare County and the State of California, but that rent constituted a larger percentage of household income. The median rent was $755 in Cutler and $873 in Orosi, whereas the median rent was $877 in Tulare County and $1,358 in the State of California, respectively. In Cutler, the percentage of households paying 35% or more of income on housing was 63.9% and in Orosi, it was 68.2%, while the percentage of households paying 35% or more of income on housing was 47.2% in Tulare County and 47.0% in the State of California."[28]

Table 6-12
2012-2017 American Community Survey: Renter Cost

Geography	Median Rent	Gross Rent as a % of Household Income					
		Less than 15.0 %	15.0% to 19.9%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	$1,358	9.6%	10.9%	12.1%	11.5%	9.6%	46.4%
Tulare County	$877	10.6%	10.5%	12.1%	10.7%	8.7%	47.2%
Cutler CDP	$755	12.0%	13.1%	5.7%	1.1%	4.0%	63.9%
Orosi CDP	$873	11.5%	14.1%	6.2%	0.0%	0.0%	68.2%

Source: 2013-2017 American Community Survey 5-Year Estimates.

As shown on in Table 3-49 of the Tulare County Housing Element 2015 Update, there is no indication of exclusively farmworker housing (2009) within the communities of Cutler-Orosi. Further, throughout the County; "The supply of farmworker housing remains inadequate, largely because area growers only offer limited housing facilities and supportive services to employees. Historically, many migrant agricultural workers resided in farm labor camps throughout the County. However, similar to areas throughout the State, many farm operators have shifted

[26] Ibid. 3-21 and 3-22.
[27] Draft Cutler-Orosi Community Plan 2021 Update. Page 179.
[28] Ibid. 171.

away from hiring their own workers, and instead use farm labor contractors to provide needed agricultural labor, particularly for migrant or seasonal labor. The majority of farm operators is therefore not directly involved with employing their workforce, and has also removed themselves from providing housing for the workers. However, it is difficult to quantify this trend because additional housing for up to nine farmworkers is permitted by right in all Tulare County's AE (Exclusive Agriculture) zones and data on these housing units is limited. Farms that are providing housing for ten or more employees are detailed in the Table 3-49 [of the Housing Element]."[29]

As noted earlier, the Plan Update (see pages 150-151) contains policies that are intended to provide housing opportunities (including affordable housing) as follows:

Housing Guiding Principle 1.1 - Endeavor to improve opportunities for affordable housing in a wide range of housing types in the communities throughout the unincorporated area of the County.

Housing Policy 1.13 - Encourage the utilization of modular units, prefabricated units, and manufactured homes.

Housing Policy 1.14 - Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Housing Policy 1.15 - Encourage housing counseling programs for low-income homebuyers and homeowners.

Housing Policy 1.16 - Review community plans and zoning to ensure they provide for adequate affordable residential development.

Housing Guiding Principle 1.2 - Promote equal housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, family status, disability, or any other arbitrary basis.

Housing Guiding Principle 1.3 - Strive to meet the housing needs of migrant and non-migrant farmworkers and their families with a suitable, affordable and satisfactory living environment.

Housing Policy 1.31 - Encourage the provision of farmworker housing opportunities in conformance with the Employee Housing Act.

Housing Guiding Principle 1.4 - Enhance and support emergency shelters and transitional and supportive housing programs that assist the homeless and others in need.

[29] Tulare County Housing Element 2015 Update. Pages 3-57 and 3-58.

Housing Policy 1.51 - Encourage the construction of new housing units for "special needs" groups, including senior citizens, large families, single heads of households, households of persons with physical and/or mental disabilities, minorities, farmworkers, and the homeless in close proximity to transit, services, and jobs.

Housing Policy 1.52 - Support and encourage the development and improvement of senior citizen group housing, convalescent homes, and other continuous care facilities.

Housing Policy 1.55 - Encourage development of rental housing for large families, as well as providing for other housing needs and types.

Housing Guiding Principle 1.6 - Assess and amend County ordinances, standards, practices and procedures considered necessary to carry out the County's essential housing goal of the attainment of a suitable, affordable and satisfactory living environment for every present and future resident in unincorporated areas.

Housing Policy 2.14 - Create and maintain a matrix of Infrastructure Development Priorities for Disadvantaged Unincorporated Communities in Tulare County thorough analysis and investigation of public infrastructure needs and deficits, pursuant to Action Program 9.

Housing Guiding Principle 2.2 - Require proposed new housing developments located within the development boundaries of unincorporated communities to have the necessary infrastructure and capacity to support the development.

Housing Policy 2.21 - Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

Housing Guiding Principle 3.1 - Encourage "smart growth" designed development that serves the unincorporated communities, the environment, and the economy of Tulare County.

Housing Policy 3.11 - Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

Housing Policy 3.23 - Prepare new and/or updated community plans that provide adequate sites for a variety of types of housing within the development boundaries of community.

Inappropriateness of Affordable Housing

As shown in Figure 7B – RHNA 2014-2023 Allocation by Income Category in the Community Plan Update, the 2014 Regional Housing Needs Assessment (RHNA) allocated a total 7,081 units to unincorporated areas of the County to meet the January 1, 2007 - June 30, 2014 existing and projected housing need. The allocation included 1,477 units for very low income; 1,065 units for low income (2,542 combined very low and low income), 1,169 units for moderate income;

and 3,370 units for above moderate income.[30] The Tulare County Housing Element was certified by the State Department of Housing and Community Development (HCD) in June 2012. It is noted that the RHNA allocation is County-wide and is not specific to Cutler-Orosi.

Overall, the Project's planning area is suitable for affordable housing as a result of the current and proposed land use patterns which contains adequate residential site locations. Typically, affordable housing projects require high-densities to maintain economic and financial viability. Low-income and high density affordable housing does not result in sufficient income volume to pay for the cost of construction (without subsidies) and farm worker housing would likely require additional subsidies to recapture cost.

The Project's planning area is located adjacent to farmland, industrial uses, major streets/highways (including State Route 63) which, without adequate buffers, could result in land use incompatibility with affordable housing. For example, AG-1.11 Agricultural Buffers states that: The County shall examine the feasibility of employing agricultural buffers between agricultural and non-agricultural uses, and along the edges of UDBs and HDBs. Considering factors include the type of operation and chemicals used for spraying, building orientation, planting of trees for screening, location of existing and future rights-of-way (roads, the abandoned railroad line, Sand Creek, power lines, etc.), and unique site conditions. Also, Policy HS-8.8 Adjacent Uses states that: The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County; and Policy HS-8.15 Noise Buffering states that: The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.

GROWTH INDUCEMENT

As outlined in the CEQA Guidelines § 15126.2 (d), growth-inducing impacts of the proposed Project should "[d]iscuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."[31]

[30] Draft Cutler-Orosi Community Plan 2021 Update. Page 50.
[31] CEQA Guidelines. Section 15126.2 (d).

GROWTH IMPACTS

Tulare County recognizes that land use and other policies must continue to maintain and encourage a diverse and entrepreneurial economy to ensure that the community thrives. The Community Plan Update is intended to implement Tulare County's vision for a long-range economic growth, sets forth the policy framework supportive of that vision, and identifies actions that Tulare County leaders will take to achieve these goals. In particular, this Chapter identifies growing economic sectors that the County looks to accommodate and outlines economic development strategies that will match local residents with the job skills required by employers. As shown in the **Tables 6-5** and **6-6**, the Cutler-Orosi communities included 80 and 186 businesses; respectively. As noted in the Community Plan Update, "The objective in the preparation of the Cutler-Orosi Community Plan is to develop a plan, which can accurately reflect the needs and priorities of the unincorporated communities of Cutler-Orosi. In addition, the County has prepared an Environmental Impact Report. The Environmental Impact Report (EIR) is to assist in fostering future economic development, grants, and economic development opportunities, which can tier off the General Plan and Community Plan EIR's."[32] The Update includes an Economic Development Strategy the including an effort to reduce barriers to economic development, expansion of infrastructure, reducing permit requirements, encouraging collegiate level education, encouraging home occupation, etc. A significant component of the Update includes establishing a Mixed Use Overlay zone. As contained in the Plan Update, "To promote Economic Development within the Cutler-Orosi Urban Development Boundary, a Mixed Use Overlay zoning district is being established to allow for flexibility in the allowed uses within Cutler-Orosi. In addition, the use permit restriction is updated to allow for ministerial approval [by the Planning Director]. Development standards are established to ensure high quality development within this mixed use overlay district. To promote Economic Development within the Cutler-Orosi Urban Development Boundary, a Mixed Use Overlay zoning district is being established to allow for flexibility in the allowed uses within Cutler-Orosi. In addition, the use permit restriction is updated to allow for ministerial approval [by the Planning Director]. Development standards are established to ensure high quality development within this mixed use overlay district."[33] As such, no mitigation measures are necessary nor needed to accommodate unanticipated growth impacts.

[32] Draft Cutler-Orosi Community Plan 2021 Update. Page 21.
[33] Ibid. 210.

Population Growth Forecast

As shown in **Table 6-13** (Table 34 in the Community Plan Update), Cutler and Orosi's population is projected to increase by 2,489 persons to an estimated Year 2030 population of 16,099.[34]

Table 6-13
Cutler-Orosi Population Project

Year	2017	2020[a]	2030[a]
Cutler	5,850	6,081	6,920
Orosi	7,760	8,067	9,179
Total	13,610	14,148	16,099

a: Growth rate of 1.3 annually consistent with the Tulare County General Plan 2030 Update.

Demand Forecast and Population and Housing Units

Based on the data and analysis described earlier and forecasted population and housing estimates contained in the Plan Update (at Tables Table 39, 40, 41, and 42 of the Community Plan), Year 2030 square footage and residential unit demand forecast for the Cutler-Orosi Planning area is provided as follows.

"The Year 2017 baseline population was determined by projecting the 2017 American Community Survey data population by an annual growth rate of 1.3% annually. The Survey indicated that in Year 2017 the community of Cutler had 1,293 dwelling units (including vacant dwellings) with a population of 5,850. At an annual growth rate of 1.3%, the projected housing units are 1,344 and 1,529 in Years 2020 and 2030, respectively, and projected population is 6,081 and 6,920 in Years 2020 and 2030, respectively. In the community of Orosi had 2,076 dwelling units (including vacant dwellings) with a population of 7,760. At an annual growth rate of 1.3%, the projected housing units are 2,158 and 2,456 in Years 2020 and 2030, respectively, and projected population is 8,067 and 9,179 in Years 2020 and 2030, respectively."[35]

Generally, growth inducing impacts are a result of very large businesses or very large housing developments. A large influx of jobs or people would require additional services which could potentially induce growth related impacts. In addition, changes to a General Plan could also induce growth. The General Plan 2030 Update Background Report notes that Tulare County's population will grow from 429,000 in 2007 to 742,970 in 2030. This anticipated growth scenario has already been identified and previously addressed in the Tulare County General Plan 2030 Update EIR.

[34] Op. Cit. 190.
[35] Op. Cit.

As there are no development proposals as part of this Update, there will be no physical changes to the environment as the Update is an exercise of preparing a Community Plan that is consistent with the Tulare County General Plan 2030 Update and Zoning classifications and Zoning Map for Cutler-Orosi. The Urban Development Boundary will also be expanded to accommodate projected growth and land use needs. Development proposals will be evaluated on a case-by-case basis to determine impacts. As development occurs through the Year 2030 Planning horizon, the Project will result in increases in economic benefits to the region over time. Ultimately, the Project will result in temporary construction-related jobs and permanent jobs in retail, highway commercial, services, and light industrial sectors. The proposed Project will not result in a substantial increase in employment, and correspondingly, will not result in a substantial increase in population and associated demand for housing in the area. For these reasons, the Project is not anticipated to result in substantial growth inducement. Without an increase to the number of employees, the proposed Project will have a minimal effect on employment, public services and facilities, and growth in the overall region. Given Tulare County's housing vacancy rates combined with the limited permanent workforce needed to support the Project, it is anticipated that adequate housing would be available without exceeding the demands of Tulare County's existing housing supply. Therefore, the proposed Plan Update will not result in new growth in the area relating to the potential population increase. Lastly, in the event of an increase to the local population within Cutler-Orosi, the proposed Planning area contains sufficient residentially zoned land to accommodate growth through the Year 2030 Planning horizon.

All of these issues, to a greater or lesser extent, are subject to analysis in Chapter 3 of this EIR. Some of the effects of growth can be viewed as "good" and others as "bad". Some of the effects would occur without adoption and implementation of the draft Community Plan Update; they would occur, however, to a greater or lesser degree. The CEQA Guidelines state:

"It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment"[36]

As indicated in **Table 6-14**, the proposed Project does not have the potential to induce significant growth in Tulare County.

Table 6-14
Discussion of Potential Growth Inducing Impacts

Potential Growth Inducing Impacts	Discussion
Foster Economic or Population Growth	The proposed Project will not require new employees and thus will not result in significant economic growth. Although the proposed Project will, over time, result in an economic benefit for Tulare County, the proposed Project will not induce substantial growth.
Construction of Additional Housing – Either Directly or Indirectly	The proposed Project would not increase the demand for housing beyond the existing housing supply. Over time, through the Year 2030 Planning horizon, additional planned housing will likely develop to accommodate projected increases in the local population. The Project (i.e., Plan Update) will not result in a need for additional housing.

[36] CEQA Guidelines. Section 15126.2(d).

Table 6-14 Discussion of Potential Growth Inducing Impacts	
Potential Growth Inducing Impacts	**Discussion**
Other Growth Actions	The proposed Project will would not remove obstacles to population growth and will not induce other growth-related activities.

CONCLUSION

The adoption and implementation of the Cutler-Orosi Community Plan 2021 Update may result in some indirect growth inducing impacts on the local environment. Properly planned growth will have both beneficial (new housing opportunities, improved/increased water and wastewater capabilities, new/improved roadways, etc.) and adverse impacts (e.g., air quality, water supply/usage, wastewater treatment, traffic, etc.) on the physical environment of the communities. The overall benefits derived from having a Plan for the orderly development of the Cutler-Orosi outweighs potential harmful effects that may be indirectly induced from plan adoption and implementation through the Year 2030 Planning horizon.

ACRONYMS

AB	Assembly Bill (in California)
CEQA	California Environmental Quality Act
CDP	Census Designated Place
DEIR	Draft Environmental Impact Report
EDD	California Employment Development Department
EIR	Environmental Impact Report
RMA	Tulare County Resource Management Agency
SB	Senate Bill (in California)
TCAG	Tulare County Association of Governments
UDB	Urban Development Boundary

REFERENCES

California Environmental Quality Act (CEQA) Guidelines, Section 15126.2 (a), 15131. Accessed July 2021 at: https://resources.ca.gov/-/media/CNRA-Website/Files/Programs-and-Projects/CEQA/CEQA-Homepage/2019_CEQA_Statutes_and_Guidelines.pdf?la=en&hash=28D5D3CF051762486FC0A43BB50921F85E30E8CC

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U.S. Constitution.
Amendments to the Constitution of the United States of America, which can be accessed at http://www.gpo.gov/fdsys/pkg/GPO-CONAN-1992/pdf/GPO-CONAN-1992-7.pdf

Immitigable Impacts
Chapter 7

ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

This Project is not anticipated to result in any significant and unavoidable cumulative impact to the any Resource. As such, the cumulative impact from this Project will not have the potential to adversely impact nearby humans and will not result in a Mandatory Finding of Significance. All impacts have been found to be less than significant, or have been mitigated to a level considered less than significant.

Under CEQA Guidelines Section 15126.2 (b), "[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the Project is being proposed, notwithstanding their effect, should be described."[1] This analysis should include a description of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided technical studies (and other information) included in appendices A through G contained in the draft Cutler-Orosi Community Plan 2021 Update, the Tulare County General Plan Update, General Plan 2030Update Background Report, and/or Tulare County General Plan 2030 Update EIR.

IRREVERSIBLE IMPACTS

Under CEQA Guidelines Section 15126.2 (c), "[u]ses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)"[2]

STATEMENT OF OVERRIDING CONSIDERATIONS

Authority to Approve Project Despite Significant Effects

[1] 2013 CEQA Guidelines, Section 15126.2 (b).
[2] CEQA Guidelines, Section 15126.2 (c).

As contained in CEQA Guidelines Section 15043, "[a] public agency may approve a Project even though the Project would cause a significant effect on the environment, if the agency makes a fully informed and publicly disclosed decision that:

(a) There is no feasible way to lessen or avoid the significant effect (see Section 15091); and
(b) Specifically identified expected benefits from the Project outweigh the policy of reducing or avoiding significant environmental impacts of the Project."[3]

An agency may prepare a statement of overriding considerations. As noted in CEQA Guidelines Section 15093, "CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed Project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."[4]

"When the lead agency approves a Project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record."[5]

"If an agency makes a statement of overriding considerations, the statement should be included in the record of the Project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091."[6]

Overriding Considerations for the proposed Project

The findings above show that there are no significant and unavoidable program related or cumulative environmental effects that remain significant and there are effective feasible mitigation measures. Tulare County concludes that there are feasible alternatives that can reduce this potentially significant and unavoidable impact to a less than significant level and that all feasible alternatives have some significant and unavoidable impacts.

Finding of No Feasible Alternatives

CEQA section 21061.1 defines "feasibility" as involving a balancing of various economic, environmental, social, and technological factors.[3]

The primary purpose of the proposed Project is being updated to implement the 2030 Tulare County General Plan (2012). Entitlements including General Plan amendment and changes to

[3] Pub. Resources Code, § 21081(a)(3); CEQA Guidelines, § 15091(a)(3).

Zoning District Boundaries, and Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Cutler/Orosi Community. Consistent with the General Plan and the Study Area Boundary the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary and their impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors in December 2016 for inclusion in the Circulation Element of this Plan Update. The Cutler-Orosi Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, pedestrian circulation.

As such, there will be no potential of ***Significant and Unavoidable Impact*** as mitigation, where applicable, would be economically reasonable.

In addition, the Project's merits would outweigh any unavoidable and unmitigable impacts to warrant a Statement of Overriding Considerations.

PROJECT BENEFIT STATEMENTS

In December 2016, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Cutler-Orosi Community Plan. The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. "The proposed 2021 Cutler-Orosi Community Plan Update is consistent with the General Plan 2030 Update (2021) and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the following General Plan goals:

    b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
    c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
    d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
    e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
    f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be improved for the following reasons:

    a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
    b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
    c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

Project Benefit # 1 – Implementation of AB 32

AB 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of (GHG) emission to 1997 models by the year 2020 and implements the objectives for the Year 2050 goal.

Project Benefit # 2 - Sustainability

Tulare County Climate Action Plan (CAP). In light of AB 32, the County of Tulare Board of Supervisors adopted its General Plan 2030 Update on August 28, 2012 and included a Climate Action Plan (or CAP). This Climate Action Plan identifies specific General Plan policies that encourage solid waste reduction. The proposed Project was developed to support and implement the efforts made by Tulare County to address climate change through its General Plan and Climate Action Plan.

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. Nine (9) General Plan policies that relate to Sustainability; below is a summary of some of those policies.

PF-3.4	Mixed Use Opportunities
LU-1.1	Smart Growth and Healthy Communities
LU-1.8	Encourage Infill Development
LU-7.15	Energy Conservation
LU-7.16	Water Conservation
LU-7.17	Shared Parking Facilities
AQ-3.3	Street Design
AQ-3.5	Alternative Energy Design
AQ-3.6	Mixed Land Uses

TCAG Sustainable Communities Strategy (2014 Regional Transportation Plan)

AB 32 requires the California Air Resources Board to set greenhouse gas emission targets. Under SB 375 Metropolitan Planning Organizations like TCAG are required to create a Sustainable Communities Strategy consistent with AB 32 to regulate development in relation to vehicle miles traveled. TCAG included this strategy in the 2014 Regional Transportation Plan. A highlight of the implementation strategies include:

- Encourage jurisdictions in Tulare County to consider bicycle lanes, public transit, transit-oriented and mixed-use development, pedestrian networks, rain and other complete streets development during updates of general plan or other local plans.
- Implement a Complete Streets Program whereby agencies will prepare plans to accommodate all transportation users, including pedestrians, bicyclists, transit riders, and motor vehicle operators and riders, and implement those plans as aggressively as feasible.
- Provide for continued coordination and evaluation of the planned circulation system among cities and the county.
- Fund the development of capital improvement programs for complete streets and active transportation-type plans, as funds are available.
- Evaluate intersections, bridges, interchanges, and rail grade crossings for needed safety improvements.
- Develop funding strategies for safety projects in cooperation with Caltrans and member agencies.
- Examine alternative funding sources for streets, roads, state highways, rail systems, transit, bicycle, pedestrian, and other transportation mode improvements.
- Utilize Cap and Trade funds available for transit, if available, for projects in Tulare County.
- Encourage local agencies to support implementation of bicycle support facilities such as bike racks, showers, and other facilities during the project review process.
- Utilize Cap and Trade funds available for bicycle and pedestrian projects, if available, for projects in Tulare County.
- Encourage mixed-use developments in urbanized areas.
- Encourage provision of an adequate supply of housing for the region's workforce and

adequate sites to accommodate business expansion to minimize interregional trips and long-distance commuting.
- Support and participate in efforts and coalitions promoting use of Cap and Trade funding for projects that help reduce greenhouse gas emissions in Tulare County.
- Support investment in bicycle and pedestrian systems, giving attention to projects and networks that will allow residents to walk and bicycle to frequented destinations, including schools, parks, healthcare institutions and transit stops.
- Provide environmental justice communities opportunities for input into transportation plans, programs, and projects in a manner consistent with Title VI of the 1964 Civil Rights Act and Executive Order 12898 on Environmental Justice, including the prohibition of intentional discrimination and adverse disparate impact with regard to race, ethnicity or national origin.

These implementation strategies are compatible with the Tulare County General Plan policies.

Project Benefit # 3 - Lessen Significant Impacts

Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creations of additional buildings require the use of additional resources, which on a cumulative basis would increase impacts to environment in general.)

Project Benefit # 4 - Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if a site for a particular alternative is too small, or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

Project Benefit # 5 - Project Specific Elements

Overall, all elements (including Project's, Rezoning of Properties within the Study Area were studied

a) The County is proposing land use and rezoning designations in certain parcels to be consistent with the land uses within the General Plan and to bring existing non-compliant properties into conformity with the Tulare County Zoning Code. This required looking at the existing properties, meetings with the Community, and review of aerial maps and County records to analyze and decide on which properties were updated.

b) Mixed Use Zone. The Cutler/Orosi Community Plan Update includes a mixed use zone. This Update requires updating the Tulare County Zoning Code to reflect a mixed use zoning district specifically within the Cutler/Orosi Community in compliance with the mixed use designation in the 2030 General Plan.

Complete Streets. A Complete Streets Program was approved by the Board of Supervisors in December 2016 for inclusion in the Circulation Element of this

Community Plan Update. The Cutler-Orosi Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, pedestrian circulation. As indicated in the draft Community Plan Update, the following projects have been included on the Tulare County Association of Governments (TCAG) Measure R list as Complete Streets:

"Cutler
1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Road
5. First Drive – SR 63 to Road 124

Orosi
1. Avenue 413 – Road 124 to SR 63
2. Avenue 419
3. Avenue 416 – SR-63 to Dinuba
4. Road 130 (Strong interest from school district)
5. Road 124"[4]

Project Benefit # 6: Implementation of Countywide General Plan Policies

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-20. Two seventy-five (275) General Policies apply to this Project; below is a listing of applicable policies:

I. AESTHETICS – 14 Policies

LU-5.3	Storage Screening
LU-5.6	Industrial Use Buffer
LU-7.6	Screening
LU-7.14	Contextual and Compatible Design
LU-7.19	Minimize Lighting Impacts
SL-1.1	Natural Landscapes
SL-1.2	Working Landscapes
SL-2.1	Designated Scenic Routes and Highways
ERM-1.4	Protect Riparian Areas
ERM-1.5	Riparian Management Plans and Mining Reclamation Plans
ERM-1.6	Management of Wetlands
ERM-1.8	Open Space Buffers
ERM-5.19	Night Sky Protection
ERM-1.15	Minimize Lighting Impacts

[4]. Draft Cutler-Orosi Community Plan 2021 Update. Page 213.

II. AGRICULTURAL LANDS & FORESTRY RESOURCES – 12 Policies

AG-1.1 Primary Land Use
AG-1.3 Williamson Act
AG-1.4 Williamson Act in UDBs and HDBs
AG-1.6 Conservation Easements
AG-1.7 Preservation of Agricultural Lands
AG-1.8 Agriculture within Urban Boundaries
AG-1.9 Agricultural Preserves Outside Urban Boundaries
AG-1.10 Extension of Infrastructure into Agricultural Areas
AG-1.11 Agricultural Buffers
AG-1.17 Agricultural Water Resources
LU-2.3 Open Space Character
LU-2.6 Industrial Development

III. AIR QUALITY – 31 Policies

AQ-1.1 Cooperation with Other Agencies
AQ-1.2 Cooperation with Local Jurisdictions
AQ-1.3 Cumulative Air Quality Impacts
AQ-1.4 Air Quality Land Use Compatibility
AQ-1.5 California Environmental Quality Act (CEQA) Compliance
AQ-2.1 Transportation Demand Management Programs
AQ-2.2 Indirect Source Review
AQ-2.3 Transportation and Air Quality
AQ-2.4 Transportation Management Associations
AQ-2.5 Ridesharing
AQ-3.1 Location of Support Services
AQ-3.2 Infill near Employment
AQ-3.3 Street Design
AQ-3.4 Landscape
AQ-3.5 Alternative Energy Design
AQ-3.6 Mixed Land Uses
AQ-4.1 Air Pollution Control Technology
AQ-4.2 Dust Suppression Measures
AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions
AQ-4.4 Wood Burning Devices
AQ-4.5 Public Awareness
AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection
LU-1.1 Smart Growth and Healthy Communities
LU-1.2 Innovative Development
LU-1.3 Prevent Incompatible
LU-1.4 Compact Development
LU-1.8 Encourage Infill Development
LU-3.2 Cluster Development

LU-3.3	High-Density Residential Locations
TC-5.1	Bicycle/Pedestrian Trail System
TC-5.2	Consider Non-Motorized Modes in Planning and Development

IV. BIOLOGICAL RESOURCES – 11 Policies

ERM-1.1	Protection of Rare and Endangered Species
ERM-1.2	Development in Environmentally Sensitive Areas
ERM-1.4	Protect Riparian Areas
ERM-1.5	Riparian Management Plans and Mining Reclamation Plans
ERM-1.6	Management of Wetlands
ERM-1.7	Planting of Native Vegetation
ERM-1.12	Management of Oak Woodland Communities
ERM-1.14	Mitigation and Conservation Banking Program
ERM-1.16	Cooperate with Wildlife Agencies
ERM-1.17	Conservation Plan Coordination
ERM-2.7	Minimize Adverse Impacts

V. CULTURAL RESOURCES – 6 Policies

ERM-6.1	Evaluation of Cultural and Archaeological Resources
ERM-6.2	Protection of Resources with Potential State or Federal Designations
ERM-6.3	Alteration of Sites with Identified Cultural Resources
ERM-6.4	Mitigation
ERM-6.9	Confidentiality of Archaeological Sites
ERM-6.10	Grading Cultural Resources Sites

VI. ENERGY - 5 Policies

ERM-4.1	Energy Conservation and Efficiency Measures
ERM-4.2	Streetscape and Parking Area Improvements for Energy Conservation
ERM-4.3	Local and State Programs
ERM-4.4	Promote Energy Conservation Awareness
AQ-3.5	Alternative Energy Design

VII. GEOLOGY AND SOILS – 5 Policies

ERM-7.2	Soil Productivity
HS-2.1	Continued Evaluation of Earthquake Risks
HS-2.4	Structure Siting
HS-2.7	Subsidence
HS-2.8	Alquist-Priolo Act Compliance

VIII GREENHOUSE GAS EMISSIONS – 6 Policies

AQ-1.7	Support Statewide Climate Change Solutions
AQ-1.8	Greenhouse Gas Emissions Reduction Plan/Climate Action Plan
AQ-1.9	Support Off-Site Measures to Reduce Greenhouse Gas Emissions
AQ-1.10	Alternative Fuel Vehicle Infrastructure
AQ-3.5	Alternative Energy Design
LU-1.1	Smart Growth and Healthy Communities

IX. HAZARDS AND HAZARDOUS MATERIALS – 5 Policies

HS-4.1	Hazardous Materials
HS-4.3	Incompatible Land Uses
HS-4.4	Contamination Prevention
HS-4.6	Pesticide Control
ERM-3.1	Environmental Contamination

X. HYDROLOGY AND WATER QUALITY - 40 Policies

PF-4.14	Compatible Project Design
PFS-2.1	Water Supply
PFS-2.2	Adequate Systems
PFS-2.3	Well Testing
PFS-2.4	Water Connections
PFS-2.5	New Systems or Individual Wells
PFS-3.1	Private Sewage Disposal Standards
PFS-3.2	Adequate Capacity
PFS-3.3	New Development Requirements
PFS-3.7	Financing
PFS-4.1	Stormwater Management Plans
PFS-4.2	Site Improvements
PFS-4.3	Development Requirements
PFS-4.4	Stormwater Retention Facilities
PFS-4.5	Detention/Retention Basins Design
PFS-4.6	Agency Coordination
PFS-4.7	NPDES Enforcement
AG-1.17	Agricultural Water Resources
HS-4.4	Contamination Prevention
HS-5.1	Development Compliance with Federal, State, and Local Regulations
HS-5.2	Development in Floodplain Zones
HS-5.4	Multi-Purpose Flood Control Measures
HS-5.6	Impacts to Downstream Properties
HS-5.9	Floodplain Development Restrictions
HS-5.10	Flood Control Design
HS-5.11	Natural Design
WR-1.1	Groundwater Withdrawal
WR-1.5	Expand Use of Reclaimed Wastewater

WR-1.6	Expand Use of Reclaimed Water
WR-2.1	Protect Water Quality
WR-2.2	National Pollutant Discharge Elimination System (NPDES) Enforcement
WR-2.3	Best Management Practices (BMPs)
WR-2.4	Construction Site Sediment Control
WR-2.5	Major Drainage Management
WR-2.6	Degraded Water Resources
WR-2.8	Point Source Control
WR-3.3	Adequate Water Availability
WR-3.5	Use of Native and Drought Tolerant Landscaping
WR-3.6	Water Use Efficiency
WR-3.10	Diversion of Surface Water

XI. LAND USE AND PLANNING - 23 Policies

ED-2.2	Land Requirements
ED-2.11	Industrial Parks
ED-3.1	Diverse Economic Base
ERM-2.9	Compatibility
PF-1.1	Maintain Urban Edges
PF-1.2	Location of Urban Development
PF-1.3	Land Uses in UDBs/HDBs
PF-1.4	Available Infrastructure
PF-2.1	Urban Development Boundaries – Communities
PF-2.4	Community Plans
PF-2.7	Improvement Standards in Communities
PF-2.8	Inappropriate Land Use
LU-1.2	Innovative Development
LU-2.3	Open Space Character
LU-3.1	Residential Developments
LU-3.2	Cluster Development
LU-3.3	High-Density Residential Locations
LU-5.1	Industrial Developments
LU-5.4	Compatibility with Surrounding Land Use
LU-5.7	Industrial Uses Allowed on Resource Land
LU-6.2	Buffers
LU-7.2	Integrate Natural Features
ED-2.3	New Industries

XII. MINERAL RESOURCES – 12 Policies

ERM-2.1	Conserve Mineral Deposits
ERM-2.2	Recognize Mineral Deposits
ERM-2.3	Future Resource Development
ERM-2.5	Resources Development

ERM-2.7	Minimize Adverse Impacts
ERM-2.8	Minimize Hazards and Nuisances
ERM-2.9	Compatibility
ERM-2.10	Incompatible Development
ERM-2.11	Conditions of Approval
ERM-2.12	Approved Limits
ERM-2.13	SMARA Requirements
ERM-3.1	Environmental Contamination

XIII NOISE – 17 Policies

HS-8.1	Economic Base Protection
HS-8.2	Noise Impacted Areas
HS-8.3	Noise Sensitive Land Uses
HS-8.4	Airport Noise Contours
HS-8.5	State Noise Standards
HS-8.6	Noise Level Criteria
HS-8.8	Adjacent Uses
HS-8.9	County Equipment
HS-8.10	Automobile Noise Enforcement
HS-8.11	Peak Noise Generators
HS-8.13	Noise Analysis
HS-8.14	Sound Attenuation Features
HS-8.15	Noise Buffering
HS-8.16	State Noise Insulation
HS-8.18	Construction Noise
HS-8.19	Construction Noise Control
LU-1.3	Prevent Incompatible Uses

XIV. POPULATION AND HOUSING – 33 Policies

Housing Guiding Principle 1.1
Housing Policy 1.11
Housing Policy 1.13
Housing Policy 1.14
Housing Policy 1.15
Housing Policy 1.16
Housing Guiding Principle 1.2
Housing Guiding Principle 1.3
Housing Policy 1.31
Housing Policy 1.33
Housing Policy 1.51
Housing Policy 1.52
Housing Policy 1.55

Housing Guiding Principle 1.6
Housing Policy 2.14
Housing Guiding Principle 2.2
Housing Policy 2.21
Housing Guiding Principle 3.1
Housing Policy 3.11
Housing Policy 3.12
Housing Policy 3.13
Housing Policy 3.16
Housing Policy 3.23
Guiding Principle 4.1
Housing Policy 4.11
Housing Policy 4.12
Housing Policy 4.13
Housing Policy 4.14
Housing Policy 4.15
Housing Policy 4.21
Housing Policy 4.22
Housing Policy 5.21
Housing Policy 5.26

XV PUBLIC SERVICES – 10 Policies

PFS-7.1	Fire Protection
PFS-7.2	Fire Protection Standards
PFS-7.3	Visible Signage for Roads and Buildings
PFS-7.5	Fire Staffing and Response Time Standards
PFS-7.6	Provision of Station Facilities and Equipment
PFS-7.8	Law Enforcement Staffing Ratios
PFS-7.9	Sheriff Response Time
PFS-7.12	Design Features for Crime Prevention and Reduction
PFS-8.1	Work with Local School Districts
PFS-8.4	Library Facilities and Services

XVI. RECREATION – 6 Policies

ERM-5.2	Park Amenities
ERM-5.3	Park Dedication Requirements
ERM-5.5	Collocated Facilities
ERM-5.11	Cooperation with Federal and State Agencies
ERM-5.12	Meet Changing Recreational Needs
ERM-5.15	Open Space Preservation

XVII TRANSPORTATION/TRAFFIC – 10 Policies

LU-7.3	Friendly Streets
LU-7.4	Streetscape Continuity
LU-7.6	Screening
TC-1.14	Roadway Facilities
TC-1.15	Traffic Impact Study
TC-1.16	County Level of Service (LOS) Standards
TC-5.3	Provisions for Bicycle Use
TC-5.4	Design Standards for Bicycle Routes
TC-5.8	Multi-Use Trails
HS-1.9	Emergency Access

XVIII TRIBAL CULTURAL RESOURCES – 7 Policies

ERM-6.1	Evaluation of Cultural and Archaeological Resources
ERM-6.2	Protection of Resources with Potential State or Federal Designations
ERM-6.3	Alteration of Sites with Identified Cultural Resources
ERM-6.4	Mitigation
ERM-6.8	Solicit Input from Local Native Americans
ERM-6.9	Confidentiality of Archaeological Sites
ERM-6.10	Grading Cultural Resources Sites

XIX. UTILITIES AND SERVICE SYSTEMS - 22 Policies

PFS-2.1	Water Supply
PFS-2.2	Adequate Systems
PFS-2.3	Well Testing
PFS-2.4	Water Connections
PFS-2.5	New Systems or Individual Wells
PFS-3.1	Private Sewage Disposal Standards
PFS-3.2	Adequate Capacity
PFS-3.3	New Development Requirements
PFS-3.4	Alternative Rural Wastewater Systems
PFS-3.7	Financing
PFS-4.1	Stormwater Management Plans
PFS-4.2	Site Improvements
PFS-4.3	Development Requirements
PFS-4.4	Stormwater Retention Facilities
PFS-4.5	Detention/Retention Basins Design
PFS-4.6	Agency Coordination
PFS-4.7	NPDES Enforcement.
PFS-5.1	Land Use Compatibility with Solid Waste Facilities
PFS-5.3	Solid Waste Reduction
PFS-5.4	County Usage of Recycled Materials and Products
PFS-5.8	Hazardous Waste Disposal Capabilities

PFS-5.9	Agricultural Waste
XX.	WILDFIRE - 0

DEFINITIONS AND ACRONYMS

Acronyms

ARB	California Air Resources Board
BOS	Board of Superiors
CAP	Climate Action Plan
CARB	California Air Board
GHG	Greenhouse Gas
RMA	Resource Management Agency
SOI	Sphere of Influence
TCAG	Tulare County Association of Governments
UDB	Urban Development Boundary

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Mitigation Monitoring and Reporting Program
Chapter 8

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in compliance with State law and the Environmental Impact Report (EIR) (State Clearinghouse No. 20210402587) prepared for the project by the County of Tulare.

The California Environmental Quality Act (CEQA) Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment.[1] The law states that the reporting or monitoring program shall be designed to ensure compliance during project implementation. The Mitigation Monitoring and Reporting Program contains the following elements:

• **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.

• **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.

• **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

[1] California Public Resource Code §21081.6. Accessed September 2021 at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=21081.6

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
Chapter 3.4 Biological Resources							
Construction-related Impacts to Sanford's Arrowhead							
3.4-1.a	***(Preconstruction Surveys).*** Prior to construction activities in the planning area's canals and ditches, a qualified biologist will conduct a preconstruction survey for the Sanford's arrowhead during the May-October blooming period for this species.	Prior to a project's initiation	Issuance of building permit	County of Tulare Planning and Public Works (RMA); California Department of Fish and Wildlife (CDFW)			
3.4-1.b	***(Avoidance).*** If a Sanford's arrowhead population is identified within the construction zone, it will be avoided by a minimum distance of 50 feet if possible. The avoidance area will be identified on the ground with construction fencing, brightly-colored flagging, or other easily visible means.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-1.c	***(Salvage).*** If it is not possible to avoid populations of Sanford's arrowhead identified within construction zones, a qualified biologist will remove all individual plants to be impacted and relocate them to a suitable portion of the waterway that is nearby but will not be impacted.	Prior to a project's initiation	Issuance of building permit	County of Tulare RMA and CDFW			
Construction-Related Mortality of the Western Pond Turtle. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* will be implemented.							
3.4-2	***(Pre-construction Surveys).*** Preconstruction surveys for western pond turtles must be conducted within 24 hours prior to the start of construction activities in inundated canals, ditches, and basins in the planning area. These surveys will encompass all aquatic habitat and surrounding uplands within 100 feet that are proposed for impact. Any turtles that	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	are discovered during the preconstruction surveys will be relocated to similar habitat outside of the impact area.						
Project-related Impacts to Swainson's Hawk							
3.4-3.a	***(Temporal Avoidance).*** In order to avoid impacts to nesting Swainson's hawks, construction activities in the rural zone will occur, where possible, outside the nesting season**,** typically defined as March 1-September 15.	Prior to and during construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-3.b	***(Preconstruction Surveys***). If construction activities in the rural zone must occur between March 1 and September 15, a qualified biologist will conduct preconstruction nest surveys for Swainson's hawks on and within ½ mile of the work area within 30 days prior to the start of construction. The survey will consist of inspecting all accessible, suitable trees of the survey area for the presence of nests and hawks.	Prior to and during construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-3.c	***(Avoidance of Active Nests).*** Should any active Swainson's hawk nests be discovered within the survey area, the observation will be submitted to the CNDDB, and an appropriate disturbance-free buffer will be established around the nest based on local conditions and agency guidelines. Disturbance-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until a qualified biologist has determined that the young have fledged and are capable of foraging independently.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-3.d	***(Compensatory Mitigation).*** Projects in the rural zone that will remove agricultural fields or grassland within ½ mile of a documented Swainson's hawk nest (based on concurrent Mitigation Measure 3.3.3b surveys, if applicable, and/or on a CNDDB query) will provide compensatory mitigation at a 1:1 ratio for the loss of potential Swainson's hawk foraging habitat. Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat	During construction	Issuance of building permit	County of Tulare RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	in the vicinity, to be preserved in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved Swainson's hawk conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2.						
Project-Related Mortality of Burrowing Owl							
3.4-4.a	***(Pre-construction Surveys).*** A pre-construction "take avoidance" survey for burrowing owls will be conducted by a qualified biologist within 30 prior to the start of construction according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The survey area will include all suitable habitat on and within 200 meters of the construction zone, where accessible.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-4.b	***(Avoidance of Active Nests).*** If construction activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near the construction zone, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-4.c	***(Avoidance or Passive Relocation of Resident Owls).*** During the non-breeding season (September 1-January 31), resident owls occupying burrows in the construction zone may either be avoided, or passively relocated to alternative habitat. If the	Prior to initiation of construction	Issuance of building permit	County of Tulare and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	project applicant chooses to avoid active owl burrows within the construction zone during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing and will remain in place until a qualified biologist determines that the burrows are no longer active. If the project applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.						
3.4-4.d	***(Compensatory Mitigation).*** The project applicant will provide compensatory mitigation, at a 1:1 ratio, for all potential burrowing owl habitat removed within 600 meters of active burrowing owl burrows, as identified during the preconstruction surveys provided for in Mitigation Measure 3.3.4b. Potential burrowing owl habitat in the planning area generally includes agricultural fields (suitable for foraging), ruderal habitat (suitable for nesting), and non-native grassland habitat (suitable for nesting or foraging). Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the project vicinity, to be preserved in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved burrowing owl conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2						
Construction-Related Mortality of Nesting Raptors and Migratory Birds (Including Tricolored Blackbird, Loggerhead Shrike, and White-tailed Kite)							

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
3.4-5.a	***(Avoidance).*** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the planning area will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-5.b	***(Preconstruction Surveys).*** If construction must occur between February 1-August 31, a qualified biologist will conduct preconstruction surveys for active migratory bird nests within 14 days prior to the start of work. For projects within the urban zone, the survey area will encompass the work area and accessible surrounding lands within 100 feet. For projects within the rural zone, the survey area will encompass the work area and accessible surrounding lands within 300 feet.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-5.c	***(Establish Buffers).*** Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged						
Construction-Related Mortality of Roosting Bats							
3.4-6.a	**(Temporal *Avoidance*).**To avoid potential impacts to maternity bat roosts, removal of buildings, bridges, and large trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-6.b	***(Preconstruction Surveys).***If removal of buildings, bridges, or large trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them	Prior to initiation of construction	Issuance of building permit	County of RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.						
3.4-6.c	***(Minimization).*** If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-6.d	***(Avoidance of Maternity Roosts),*** If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.						
Project-Related Impacts to Riparian Habitat							
3.4-7.a	***(Tree Survey).*** Prior to project construction, a qualified biologist will survey all areas of riparian vegetation to be impacted, and will record the species, location, and diameter at breast height (DBH) of each native tree. Upon project completion, a qualified biologist will survey the site to determine if any surveyed trees were removed.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			
3.4-7.b	***(Revegetation).*** The project applicant will provide compensation for removal of any native riparian trees. Replacement plantings will be installed at a ratio of 3:1 for trees with a DBH between 4 and 24 inches, and at a ratio of 10:1 for trees with a DBH greater than 24 inches. A revegetation plan will be prepared for the project that will prescribe methods for planting, irrigating, and maintaining the replacement trees and identify the success criteria for the revegetation effort.	Prior to initiation of construction	Issuance of building permit	County of Tulare RMA and CDFW			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
Cultural Resources							
3.5-1	In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			
3.5-2	The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.						
3.5-3	Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendent.						
Hydrology & Water Quality							
3.10-1	Install water meters and adopt a use-weighted rate schedule to encourage reduced usage by the rate-payers.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-2	Retrofit homes with water-efficient faucets, showers and toilets.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-3	Limit permissible landscape area for each residence to 2,500 square feet or less.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-4	Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources).	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-5	Mandate use of native and drought-tolerant species for all landscaping.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
3.10-6	Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-7	An elevation certificate and associated flood hazard mitigation measures is required on all proposed buildings with the FEMA Zone AE.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-8	All new construction of buildings with a shaded Zone AE shall have finished floor levels elevated one (1) foot above the adjacent natural ground.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
3.10-9	An elevation certificate and associated flood hazard mitigation measures will be required on all proposed buildings within the special flood hazard area. The finished floor elevations of all structures shall be elevated to at least the established base flood elevation resulting from the flood hazard study.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare RMA			
Noise							
3.13-1	Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation.	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable.	County of Tulare RMA			
3.13-2	Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.						

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
3.13-3	To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.						
3.13-4	Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of. the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.						
3.13-5	To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.						
3.13-6	To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.						
3.13-7	Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.						
3.13-8	The hours of future construction on the Project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.						
Tribal Cultural Resources							
3.18-1	In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance	Prior to issuance of grading permits	Retention of professional paleontologist/ ongoing	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.	Ongoing monitoring during subsurface excavation	monitoring/ submittal of Report of Findings, if applicable				
3.18-3	Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare RMA			

Table 8-1 - Mitigation Monitoring Reporting Program							
Mitigation Measure		**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendent.						

Report Preparation
Chapter 9

Key persons from the County of Tulare that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified below:

THE COUNTY OF TULARE

This EIR has been prepared for:

Tulare County Resource Management Agency (RMA)
5961 South Mooney Boulevard
Visalia, CA 93277
(559) 624-7000

TULARE COUNTY BOARD OF SUPERVISORS

- Larry Micari - District 1
- Pete Vander Poel - District 2
- Amy Shuklian - District 3 (Chairman)
- Eddie Valero - District 4 (Vice Chairman)
- Dennis Townsend - District 5

COUNTY ADMINISTRATIVE OFFICE

- Jason T. Britt, County Administrative Officer

TULARE COUNTY PLANNING COMMISSIONERS:

- John F. Elliott – District 1
- Gil Aguilar – District 2
- Bill Whitlatch – District 3
- Maria McElroy– District 4 (Chairman)
- Steve Pearson – District 5 (Vice Chairman)
- Wayne O. Millies – At Large
- Ed Dias – At Large

Tulare County Resource Management Agency (RMA)

- Reed Schenke, Director/Environmental Assessment Officer
- Michael Washam, Associate Director

- Aaron Bock, MCRP, J.D., LEED AP, Assistant Director – Economic Development & Planning
- Hector Guerra, Chief Planner, Environmental Planning Division

RMA staff who assisted in preparing this document:

- Jessica Willis, Planner IV, Environmental Planning Division
- Cheng "Tim" Chi, Planner II, Environmental Planning Division
- Danielle Folk, Planner I, Environmental Planning Division
- Johnson Vang, Engineer I, GIS Graphics
- Pedro Ornelas, Engineering Technician IV

TECHNICAL STUDIES WERE PREPARED BY THE FOLLOWING:

Live Oak Associates, INC.

Biological Evaluation

- Austin Pearson, B.A., Vice President
- Rebekah Jensen, M.S., Senior Project Manager, Staff Ecologist
- Tara Johnson-Kelly, B.A., Assistant Project Manager, Staff Ecologist

VRPA Technologies, Inc.

Noise Study Report and Noise Element

Traffic Impact Assessment and Circulation Element

- Georgiena Vivian, President/Principal
- Erik Ruehr, PE, Director of Transportation
- Jason Ellard, Transportation Engineer

COUNTY OF TULARE

RESOURCE MANAGEMENT AGENCY

5961 South Mooney Boulevard
Visalia, CA 93277

Cutler-Orosi Community Plan Update

APPENDICES to the
Draft Environmental Impact Report

September 2021

Prepared by

County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

Appendix “A”

Air Quality and Greenhouse Gas Technical Memorandum

Appendix “B”

Biological Evaluation

LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

CUTLER-OROSI COMMUNITY PLAN UPDATE
BIOLOGICAL EVALUATION
TULARE COUNTY, CALIFORNIA

Prepared by:

LIVE OAK ASSOCIATES, INC.

Austin Pearson, B.A., Vice President
Rebekah Jensen, M.S., Senior Project Manager, Staff Ecologist
Tara Johnson-Kelly, B.A., Assistant Project Manager, Staff Ecologist

Prepared for:

Hector Guerra
Tulare County Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

May 7, 2021 PN 2570-01

EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted a biological study of the 3,154-acre area ("planning area") included in the 2020 Cutler-Orosi Community Plan, and evaluated likely impacts to such resources resulting from future development of the planning area as provided for in the Community Plan. The planning area encompasses the unincorporated communities of Cutler and Orosi in Tulare County, California. It is generally bounded by Avenue 424 on the north, Road 120 on the west, Avenue 400 on the south, and the Road 132 alignment on the east. In April of 2021, LOA surveyed the planning area for its biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the planning area include orchard/vineyard, urban, agricultural field, grassland/pasture, rural developed, ruderal, artificial pond/basin, and waterway. A mosaic of agricultural and urban land uses surround the planning area, within a region dominated by similar land uses. The planning area contains an engineered, leveed segment of Sand Creek and portions of Tout Ditch, Bump and Edmiston Ditch, and Bowhay Ditch. The Central Valley Regional Water Quality Control Board may assert jurisdiction over any of these features, and the California Department of Fish and Wildlife is likely to assert jurisdiction over Sand Creek. None of the planning area's hydrological features appear to meet the definition of a Water of the U.S. under the new Navigable Waters Protection Rule; however, the U.S. Army Corps of Engineers is the final arbiter of such determinations.

Potentially significant impacts to biological resources associated with future development of the planning area include construction-related loss of Sanford's arrowhead individuals or populations; construction-related mortality of western pond turtles, Swainson's hawks, burrowing owls, other nesting raptors and migratory birds (including tricolored blackbird, white-tailed kite, and loggerhead shrike), and colonially roosting bats; project-related loss of Swainson's hawk foraging habitat and burrowing owl nesting, roosting, and foraging habitat; and project-related loss of riparian trees. These impacts can be reduced to a less than significant level under the California Environmental Quality Act (CEQA) by (1) conducting preconstruction surveys for sensitive resources, (2) avoiding or relocating any Sanford's arrowhead populations that are found in future project areas, (3) relocating any western pond turtles that are found in or around aquatic habitat to be impacted by future projects, (4) avoiding active bird/bat nests and roosts, (5) providing compensatory mitigation for project-related loss of Swainson's hawk and burrowing owl habitat, should the active nests/roosts of these birds be documented within or near future project areas, and (6) providing compensatory mitigation for any loss of riparian trees that results from future project activities.

Impacts associated with future development of the planning area would be less than significant, as defined by CEQA, for all other locally-occurring special status plants and animals, jurisdictional waters, wildlife movement corridors, sensitive natural communities, designated critical habitat, and local policies and habitat conservation plans. With the exception of the Swainson's hawk and burrowing owl, loss of habitat for special status animal species is considered a less than significant impact under CEQA.

TABLE OF CONTENTS

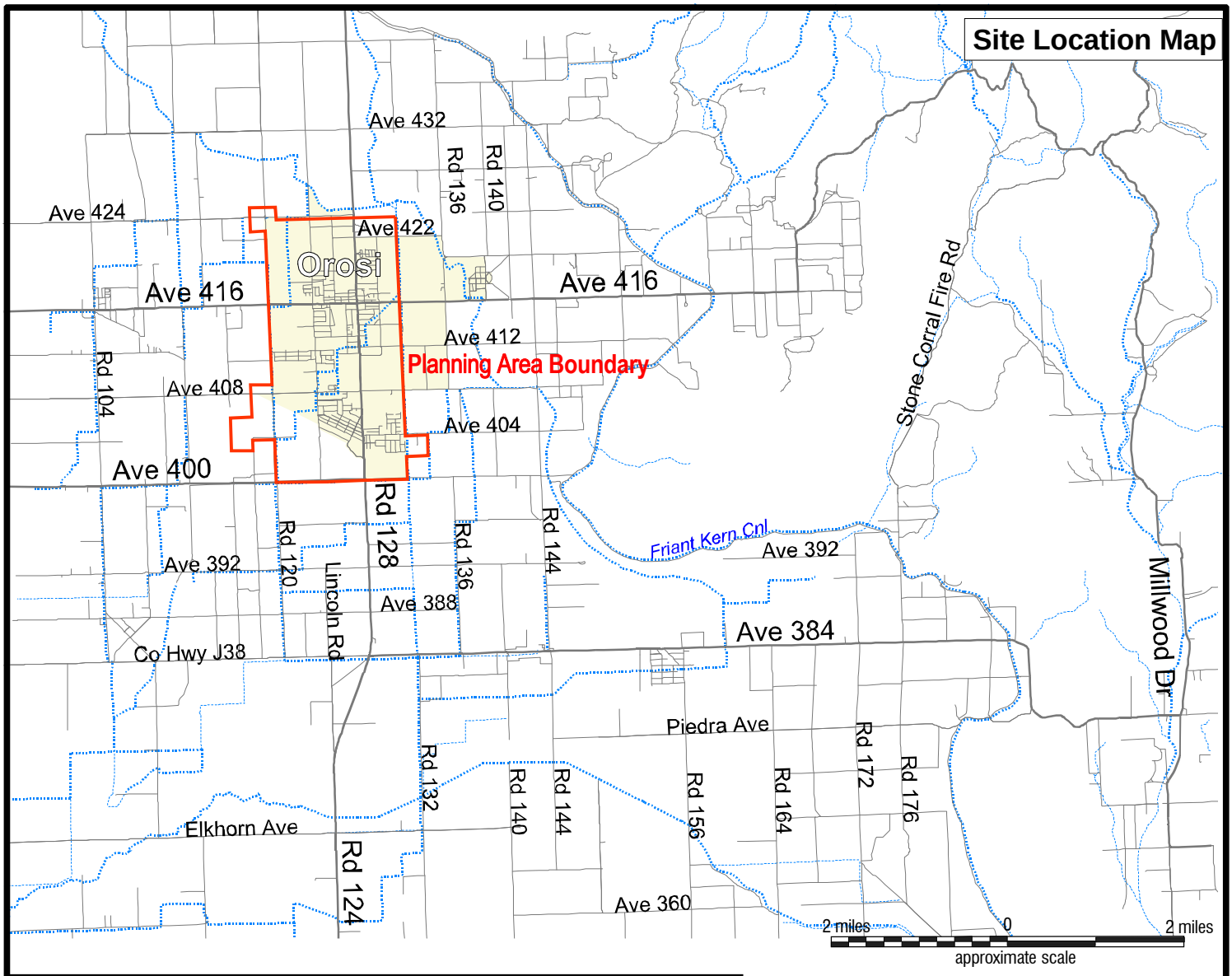
1.0 INTRODUCTION

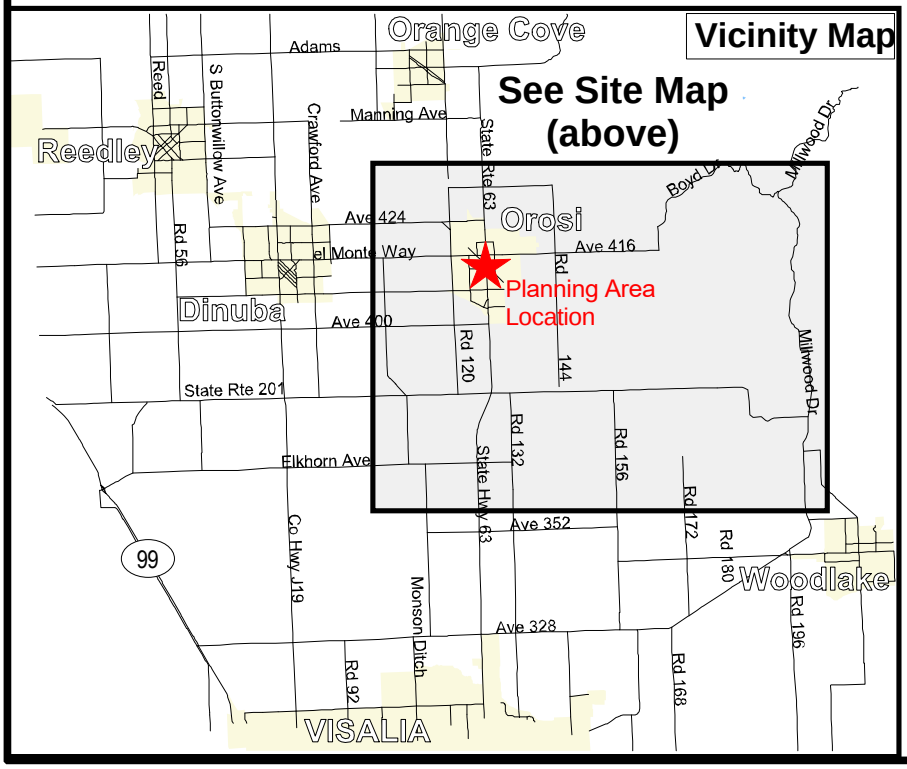
The County of Tulare proposes to update the Cutler-Orosi Community Plan to accommodate population growth in an approximately 3,154-acre area ("planning area") spanning the communities of Cutler and Orosi. This technical report, prepared by Live Oak Associates, Inc. (LOA) in compliance with the California Environmental Quality Act (CEQA), describes the biotic resources of the planning area and analyzes potential impacts to those resources associated with the plan update and resulting land use changes. The planning area consists of the communities of Cutler and Orosi and surrounding agricultural lands in Tulare County, California (Figure 1). It is generally bounded by Avenue 424 on the north, Road 120 on the west, Avenue 400 on the south, and the Road 132 alignment on the east. The planning area is located within the *Orange Cove South* U.S. Geological Survey (USGS) 7.5-minute quadrangle within Sections 01, 06, 07, 08, 12, 13, 17, 18, 19, 20, and 24 of Township 16 South, Range 25 East, Mount Diablo Base and Meridian (Figure 2).

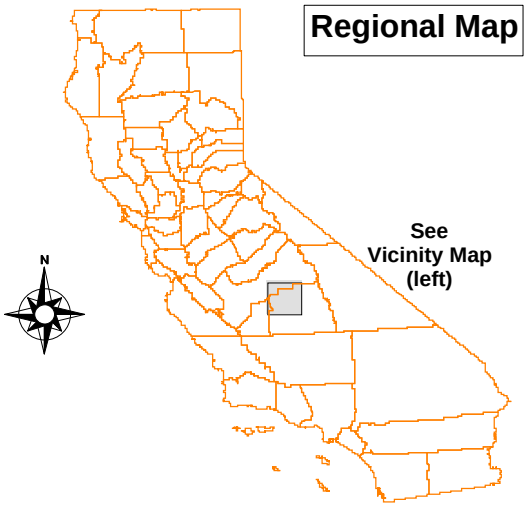
1.1 PROJECT DESCRIPTION

The proposed 2020 Cutler-Orosi Community Plan is a collection of goals, policies, and objectives for the physical development of the communities of Cutler and Orosi. Like its predecessor, the 1988 Cutler-Orosi Community Plan, the 2020 plan is intended to serve as a general guide for both public and private decision-making that affects the community, and to provide for the overall direction, density, and type of growth consistent with the needs of the communities. Both the 1988 and 2020 plans consider the entire planning area to constitute the "urban development boundary" of Cutler and Orosi, meaning that the plans envision the entire planning area being developed for residential, commercial, industrial, and recreational uses. The 2020 plan incorporates approximately 712 additional acres into the planning area from what was considered in 1988.

In addition to expanding the Cutler-Orosi planning area and providing an updated framework for growth, the 2020 plan will ensure consistency with the Tulare County General Plan 2030 Update by implementing the following General Plan goals:



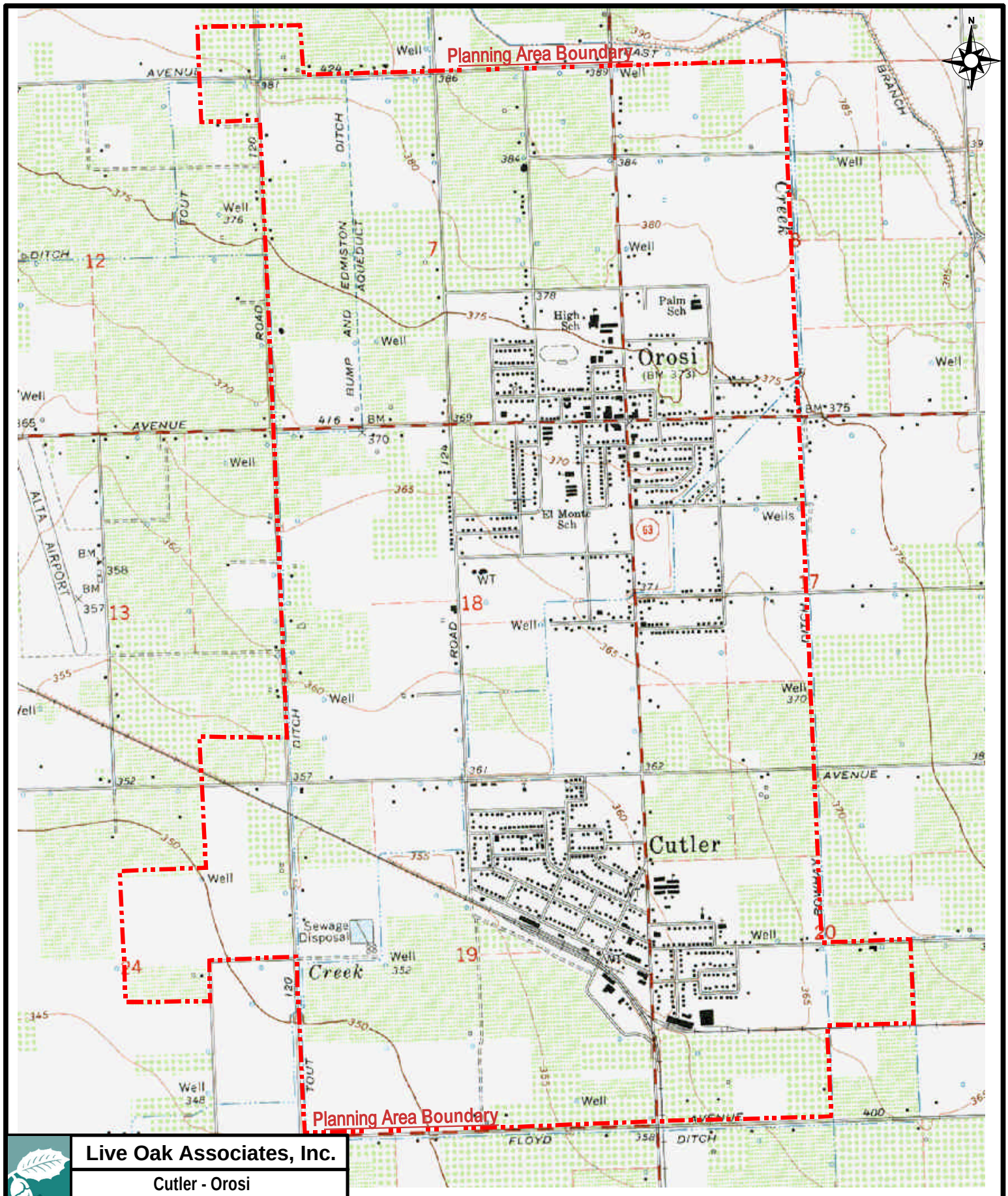




Live Oak Associates, Inc.

Cutler - Orosi Community Plan Update
Site / Vicinity Map

Date	Project #	Figure #
5/04/2021	2570-01	1



Live Oak Associates, Inc.

Cutler - Orosi
Community Plan Update
U.S.G.S. Quadrangle

Date	Project #	Figure #
5/04/2021	2570-01	2

1/2 mile 0 1/2 mile
approximate scale

From USGS
Orange Cove South 7.5' Quadrangle 1966

- Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters, such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals

- Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County

- Reduce development pressure on agriculturally designated lands within the Valley floor, thereby encouraging agricultural production to flourish

- Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction

- Help to improve the circulation and transit transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes / Pedestrian Paths.

The 2020 Cutler-Orosi Community Plan has a planning horizon through 2030.

1.2 REPORT OBJECTIVES

This report addresses issues related to: 1) sensitive biological resources of the planning area; 2) the federal, state, and local laws regulating such resources; and 3) mitigation measures that may be required to reduce the magnitude of anticipated project-related impacts to biological resources and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:

- Summarize information related to the planning area's existing biological resources

- Make reasonable inferences about the special status species that could occur within the planning area based on habitat suitability and the proximity of the site to a species' known range

- Summarize all state and federal natural resource protection laws that may be relevant to future development of the planning area

- Identify and discuss potential project-related impacts to the planning area's biological resources within the context of CEQA and state and federal laws

- Identify avoidance and mitigation measures that would reduce the magnitude of project-related impacts in a manner consistent with CEQA and species-specific guidelines

1.3 STUDY METHODOLOGY

A reconnaissance-level field survey of the planning area was conducted on April 15 and 16, 2021 by LOA ecologists Tara Johnson-Kelly and Austin Pearson. The survey consisted of driving roads of the planning area and using binoculars to scan those lands for which access was not possible. During this survey the investigators identified the principal land uses and biotic habitats of the planning area, identified plant and animal species encountered, and assessed the suitability of the planning area's habitats for special-status species.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the planning area. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2021), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2021), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

LOA's field investigation did not include a formal wetland delineation or focused surveys for special status species. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with full development of the planning area and to assess the need for more detailed studies that could be warranted if sensitive biotic resources were identified in this initial survey.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The planning area is located on the eastern side of the San Joaquin Valley. The San Joaquin Valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the central San Joaquin Valley (and the planning area) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 100 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the project is about 11 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the project vicinity is Sand Creek, which drains the lower Sierra Nevada foothills northeast of the planning area and flows southwest through Orosi and along the western edge of Cutler in an engineered leveed channel. Downstream of the planning area, it flows into Cottonwood Creek, which in turn feeds Cross Creek and ultimately the Tule River.

The planning area is situated within agricultural lands dominated by orchards near the toe of Stokes Mountain, which marks the transition from the valley floor to the lower foothills of the Sierra Nevada. The nearest natural lands are located approximately 1.5 miles to the east, and consist of open rangeland associated with Stokes Mountain. The planning area is separated from Stokes Mountain by intensive agricultural uses and the Friant-Kern Canal.

2.2 PLANNING AREA

The planning area is characterized by urban uses associated with the communities of Cutler and Orosi and a variety of rural uses that separate and surround these communities. The topography of the planning area is relatively level, ranging from 392 feet National Geodetic Vertical Datum (NGVD) at its northeastern extent to 350 feet NGVD at its southwestern extent.

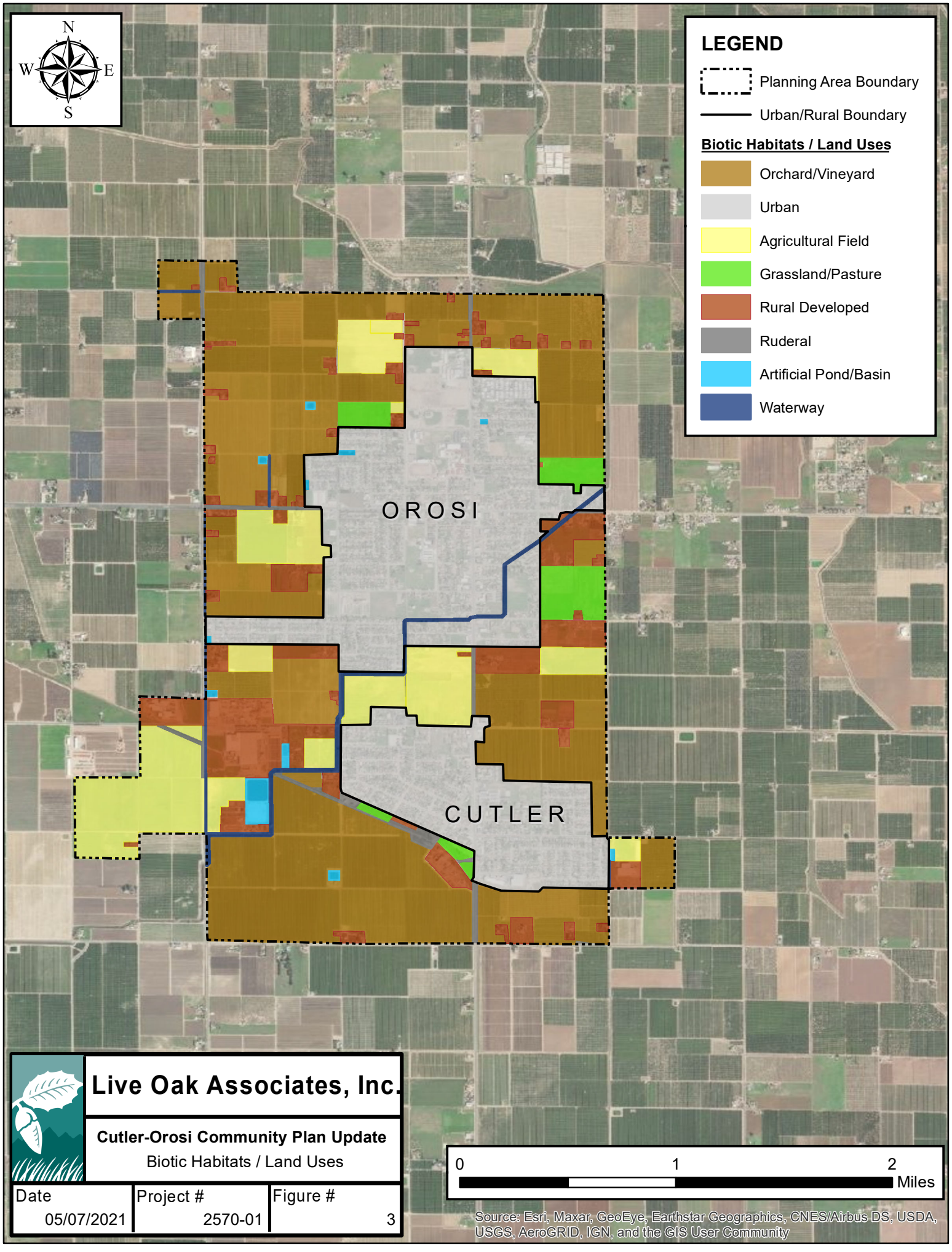
Eight soil mapping units were identified within the planning area: San Joaquin loam, 0-2 percent slopes; Hanford sandy loam, 0-2 percent slopes; Honcut sandy loam, 0-2 percent slopes; Tujunga sand; Porterville clay, 0-2 percent slopes; Exeter loam, 0-2 percent slopes; Greenfield sandy loam, typic haploxeralfs, well drained, 0-2 percent slopes; Flamen loam, moderately well drained, 0-2 percent slopes (NRCS 2021). The San Joaquin loam, Exeter loam, and Flamen loam mapping units are considered hydric under natural conditions. Hydric soils have the propensity to pond water in depressions, forming vernal pools that can provide habitat for plant and animal species unique to this environment, including certain state and federally listed species. However, due to long-term management, soils of the planning area exhibited no characteristics of hydric soils.

2.3 BIOTIC HABITATS/LAND USES

Eight biotic habitat/land use types were identified within the planning area during the April 2021 biological field survey: urban, orchard/vineyard, agricultural field, ruderal, rural developed, grassland/pasture, artificial pond/basin, and waterway (Figure 3). These habitats/land uses and their constituent plant and animal species are described in more detail below. A list of the vascular plant species observed within the planning area and the terrestrial vertebrates using, or potentially using, the planning area are provided in Appendices A and B, respectively. Selected photographs of the planning area are presented in Appendix C.

2.3.1 Urban

The planning area was largely characterized by urban uses associated with the communities of Cutler and Orosi. At the time of the field survey, these uses consisted of single- and multi-family residential neighborhoods, commercial centers, schools, sports complexes and city parks, industrial areas, and other developments and infrastructure associated with urbanized communities, as well as a number of vacant lots. Ornamental trees and shrubs that had been planted in urban areas of the planning area included white mulberry (*Morus alba*), Chinese elm (*Ulmus parvifolia*), Alexandrina magnolia (*Magnolia alexandrina*), Italian cypress (*Cupressus sempervirens*), coast redwood (*Sequoia sempervirens*), incense cedar (*Calocedrus decurrens*),



Live Oak Associates, Inc.

Cutler-Orosi Community Plan Update

Biotic Habitats / Land Uses

Date	Project #	Figure #
05/07/2021	2570-01	3

Mexican fan palm (*Washingtonia robusta*), ribbon fan palm (*Livistona decipiens*), Mexican blue palm (*Brahea armata*), Jacaranda (*Jacaranda mimosifolia*), cultivated pine (*Pinus* sp.), oleander (*Nerium oleander*), crape myrtle (*Lagerstroemia* sp.), and cultivated rose (*Rosa* sp.), among others. Industrial portions of the urban areas were generally devoid of vegetation.

A number of wildlife species adapted to human disturbance could be expected to occur in urban areas of the planning area. For example, amphibians such as Sierran tree frogs (*Pseudacris sierra*) and western toads (*Bufo boreas*) may breed and forage in wet areas associated with residential areas or parks, and reptiles such as the western fence lizard (*Sceloporus occidentalis*) and common garter snake (*Thamnophis sirtalis*) could occur in this land use type. Buildings and other human-made structures provide potential nesting habitat for the house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), and Eurasian collared dove (*Streptopelia decaocto*); all were observed during the field survey. Trees and shrubs associated with residences could be used for nesting by a variety of avian species, including the Bullock's oriole (*Icterus bullockii*), northern mockingbird (*Mimus polyglottos*), and Anna's hummingbird (*Calypte anna*). Other birds known to occur in urban lands of the planning area include rock pigeons (*Columba livia*), mourning doves (*Zenaida macroura*), California scrub jays (*Aphelocoma californica*), American robins (*Turdus migratorius*), and American crows (*Corvus brachyrhynchos*). Mammal species attracted to this land use type may include Botta's pocket gopher (*Thomomys bottae*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*). Numerous Botta's pocket gopher burrows were observed throughout Ledbetter Park.

Birds of prey may occasionally forage over the urban areas. The red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and Cooper's hawk (*Accipiter cooperi*) are likely visitors.

2.3.2 Orchard/Vineyard

Orange (*Citrus sinensis*) and European olive (*Olea europaea*) orchards and vineyards at various stages of maturity comprised a large portion of the planning area. Being highly maintained, these orchards and vineyards were mostly barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards and vineyards provide marginal habitat for amphibians; however, Sierran tree frogs and western toads may disperse through orchard lands during the winter and spring. A limited number of reptile species would be expected to forage in orchards and vineyards of the planning area due to the lack of sun required by these species for thermal regulation; however, the western fence lizard, Pacific gopher snake (*Pituophis catenifer catenifer*), common kingsnake (*Lampropeltis californiae*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*) may occasionally occur.

Orchards and vineyards provide foraging and nesting habitat for a number of avian species. Mature orchards could be used for nesting by the American robin, mourning dove, and western kingbird (*Tyrannus verticalis*). Winter migrants such as the white-crowned sparrow (*Zonotrichia leucophrys*) may forage on dormant buds in the orchards and vineyards of the planning area, while resident birds such as the European starling (*Sturnus vulgaris*) and house finch would be expected to forage on ripening fruit.

A few small mammal species would be expected to occur within the orchards and vineyards of the planning area. These include deer mice (*Peromyscus maniculatus*), California voles (*Microtus californicus*), house mice, Botta's pocket gophers, California ground squirrels (*Otospermophilus beecheyi*) and Audubon cottontail rabbits (*Sylvilagus audubonii*). California ground squirrels were observed foraging in the orchards. Various species of bat may forage over orchard and vineyard habitat for flying insects or glean insects from the leaves of trees and vines.

Foraging raptors and mammalian predators may occur in the orchards and vineyards of the planning area from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards, and red-tailed hawks and American kestrels may forage over vineyards. Mammalian predators potentially occurring in the orchards and vineyard of the planning area would include raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*).

2.3.3 Agricultural Field

The planning area contained a number of agricultural fields that, at the time of LOA's survey, were either in active cultivation or fallow. The cultivated fields were planted to wheat, alfalfa, and various row crops, and were generally devoid of vegetation other than the planted crop. The fallow fields showed evidence of past cultivation (furrows, check dams, old irrigation infrastructure, leftover grain crops), but, at the time of the survey, supported a variety of naturalized non-native grasses and forbs such as Canadian horseweed (*Erigeron canadensis*), prickly lettuce (*Lactuca serriola*), red-stemmed filaree (*Erodium cicutarium*), wall barley (*Hordeum murinum*), ripgut brome (*Bromus diandrus*), fiddleneck (*Amsinckia menziesii*), curly dock (*Rumex crispus*) and cheeseweed (*Malva parviflora*).

Intensive agricultural practices in the planning area's cultivated fields likely limit their value to wildlife; however, some wildlife species undoubtedly occur in the fields. Amphibians with the potential to use the fields include Sierran tree frogs and western toads, both of which may breed in nearby irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the western fence lizard, side-blotched lizard (*Uta stansburiana*), Pacific gopher snake, common kingsnake, and northern Pacific rattlesnake. Generally speaking, fields that are fallowed experience less frequent anthropogenic disturbance and may support larger populations of rodents and other small vertebrates, with increased predator activity.

The site's agricultural fields provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the planning area include the northern mockingbird, European starling, western meadowlark (*Sturnella neglecta*), red-tailed hawk, northern harrier (*Circus cyanus*), American kestrel, mourning dove, Eurasian collared dove, house finch, American crow, Brewer's blackbird (*Euphagus cyanocephalus*), and brown-headed cowbird (*Molothrus ater*); house finches, Eurasian collared doves, and Brewer's blackbirds were observed during the field survey. Summer migrants that would be common in the agricultural fields of the planning area include the western kingbird, while winter migrants may include the savannah sparrow (*Passerella sandwichensis*) and white-crowned sparrow; white-crowned sparrows and savannah sparrows were observed during the field survey.

Wheat and triticale fields in the San Joaquin Valley are commonly used for nesting by red-winged blackbirds (*Agelaius phoeniceus*) and tricolored blackbirds (*Agelaius tricolor*); the latter is listed as threatened under the California Endangered Species Act. No large flocks of blackbirds were observed during the surveys, however. When left fallow, the planning area's agricultural fields may support nesting by avian species that nest in ground vegetation, including the western meadowlark and mourning dove.

A few mammal species may occur within the agricultural fields of the planning area. Small mammals such as deer mice and California voles would occur in fluctuating numbers depending on the crop, disturbance regime, and season. Botta's pocket gophers and California ground squirrels could burrow around the perimeter of active fields, or within fields during fallow periods. Other small mammals that may occur from time to time within the agricultural fields of the planning area include black-tailed hares (*Lepus californicus*) and Audubon cottontail rabbits. Various species of bat may also forage over the fields of the planning area for flying insects. California ground squirrels were observed burrowing and foraging in many of the agricultural fields.

The presence of amphibians, reptiles, birds, and small mammals is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks and American kestrels may forage over agricultural fields of the planning area. Mammalian predators occurring in the agricultural fields of the planning area would include raccoons, striped skunks, coyotes, and red foxes.

2.3.4 Grassland/Pasture

Several blocks of open land were identified within the planning area that, while leveled and exhibiting signs of past cultivation and/or other ground disturbance, now appeared to function as naturalized non-native grassland or pasture habitat. Such areas supported a mix of primarily non-native grasses and forbs including ripgut brome, wild oats (*Avena fatua*), wall barley, black mustard (*Brassica nigra*), red-stem filaree, and fiddleneck. The areas used as pastures were fenced fields, generally 5-10 acres in size, that showed signs of use by livestock. Some of the pastures contained old cattle troughs and vacant livestock paddocks, while others housed small

herds of sheep and a few horses. Other grassland habitats were unfenced and did not appear to have any particular land use at the time of the surveys. The planning area's grassland/pasture habitats are surrounded by human development and are not representative of natural grasslands found elsewhere in the San Joaquin Valley. Vernal pools and swales are absent from all grassland/pastures of the planning area.

Grasslands/pastures of the planning area provide suitable habitat for a number of amphibian and reptile species. Common reptile species likely to forage and seek cover in this habitat include side-blotched lizards, western whiptails (*Aspidoscelis tigris*), gopher snakes, common kingsnakes, and northern Pacific rattlesnakes. Amphibian species expected to occur in the grasslands/pastures of the planning area include the western toad, which could aestivate (oversummer) in rodent burrows of this habitat type.

Raptors known to utilize grassland/pasture habitats within the planning area include the red-tailed hawk and American kestrel. The northern harrier would also be expected in this habitat. Other resident avian species expected in this habitat include common ravens (*Corvus corax*), mourning doves, and western meadowlarks. Spring and summer migrants that frequent these grasslands/pastures would include barn swallows (*Hirundo rustica*) and western kingbirds. Common winter migrants attracted to grasslands/pastures of the region include savannah sparrows, American pipits (*Anthus rebescens*), and Say's phoebes (*Sayornis saya*).

A number of small mammal species would be expected to use grasslands/pastures of the planning area, including California ground squirrels, Botta's pocket gophers, California voles, deer mice, and house mice. Large mammalian species expected to use this habitat type include the coyote and gray fox (*Urocyon cinereoargenteus*). Various species of bats would be expected to forage over the grasslands/pastures.

2.3.5 Rural Developed

Outside of the urban areas of Cutler and Orosi, agricultural lands are interspersed with rural residences and several small commercial/industrial complexes. These rural developed lands include homes and other structures, landscaping, driveways and parking areas, and, in some cases, small pastures and ruderal areas adjacent to buildings. Given the scope of this

investigation and the scale of the planning area, all the habitat types of each rural developed property were not delineated. Landscaping observed around many homes was extensive and often included mature non-native trees and shrubs. Horticultural species observed included tall palms such as the Mexican fan palm, conifers such as coast redwood (*Sequoia sempervirens*) and deodar cedar (*Cedrus deodora*), orchard trees including black walnut (*Juglans nigra*) and European olive (*Olea europea*), fruitless mulberry (*Morus alba*), acacia trees (*Acacia* sp.) and various shrubs such as oleander and crape myrtle.

Reptile use of the planning area's rural developed lands would be similar to that described for the surrounding agricultural areas. Avian species expected in rural developed lands include a mix of the same species that would be found in nearby urban and agricultural areas. Residential landscaping provides cover and nesting opportunities for resident birds such as California scrub jays, house finches, house sparrows, and northern mockingbirds. The cover provided by horticultural trees and shrubs can also be important to migrants passing through the area during spring and fall. Larger trees in this area provide nesting habitat for raptors such as red-tailed hawks, red-shouldered hawks (*Buteo lineatus*), and potentially Swainson's hawks (*Buteo swainsoni*). Active nest building and brooding behavior of mourning doves, Eurasian collared doves, and red-tailed hawks was observed in a row of trees lining the driveway of a rural development within a citrus orchard along Avenue 400.

Small mammals that commonly occur in rural developed areas include California ground squirrels, deer mice, Norway rats, and house mice. Botta's pocket gophers and broad-footed moles (*Scapanus latimanus*) are regularly found in garden beds and lawns. California ground squirrels were observed in rural developed areas during the field surveys. Bats of various species may roost in residential buildings and forage overhead. Mammalian predators in this area would include the coyote, raccoon, and striped skunk.

2.3.6 Ruderal

The ruderal land use type includes disturbed, open habitats such as lots where trash burning or dumping occurs, construction sites, barren land, and transportation corridors. Given the scope of this investigation and the scale of the planning area, roads were generally not mapped as ruderal

habitat, but were included with adjacent land uses. Ruderal lands of the planning area contained no vegetation or a sparse cover of common weeds, such as ripgut brome, Canada horseweed, prickly lettuce, red-stemmed filaree, wild oats (*Avena fatua*), wall barley, and silverleaf nightshade (*Solanum elaeagnifolium*).

Although the wildlife habitat value of ruderal lands within the planning area is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for agricultural fields could potentially use ruderal habitats of the planning area, as well. Mourning doves and northern mockingbirds could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground; all three species were observed during the field survey.

Small mammals that would be expected to occur on ruderal lands of the planning area include California ground squirrels, Botta's pocket gophers, deer mice, California voles, and house mice. Ground squirrel and gopher burrows were observed sporadically along the ruderal margins of roads at the time of the field survey. Mammalian predators with the potential to occur on ruderal lands of the planning area include disturbance-tolerant species such as the raccoon, red fox, and coyote.

2.3.7 Artificial Pond/Basin

A number of human-constructed basins were identified within the planning area, including basins used for stormwater detention, wastewater treatment, and agricultural purposes. Several of the basins were located on private land and not accessible during the field survey, but were identified and mapped using aerial imagery. Of the five basins that were accessible, only one was inundated at the time of the survey. That basin, located on Whittaker Avenue, was a stormwater detention basin containing approximately 10 to 20 inches of water. Cattails (*Typha sp.*) covered 25 percent of the surface area and floating aquatic plants and algae covered much of the water's surface. The banks of the basin were vegetated with non-native grasses, curly dock, and other weedy species. The remaining accessible basins were all dry at the time of the survey, and supported cattails, curly dock, and upland grass species.

Wildlife use of artificial ponds/basins would vary depending on the timing and degree to which the basins are inundated or saturated. During periods of inundation, amphibians such as the Sierran tree frog, western toad, and invasive American bullfrogs (*Lithobates catesbeianus*) could opportunistically breed in the basins and subsequently disperse through surrounding lands. American bullfrogs were observed in the inundated basin on Whittaker Avenue. During dry periods, reptile and amphibian use of the basins would be similar to that described for agricultural fields of the planning area.

Birds expected to use the planning area's basins during periods of inundation may include the great blue heron (*Ardea herodias*), great egret (*Ardea alba*), black phoebe (*Sayornis nigricans*), great-tailed grackle (*Quiscalus mexicanus*), and various species of geese and ducks. In the basin on Whittaker Avenue, a Canada goose (*Branta canadensis*) was observed brooding on a nest at the edge of the water, and mallards (*Anas platyrhynchos*) were observed foraging in the water. When the basins are saturated but not inundated, avian use may include those species that feed on mudflats, such as the killdeer. When the basins are dry, avian use would be similar to that described for agricultural fields and ruderal habitats of the planning area.

Periodic inundation likely precludes occupation of the basin floors by burrowing rodents; however, Botta's pocket gophers and California ground squirrels could burrow on the banks. Deer mice and western harvest mice could also inhabit the margins of the basins and could forage for insects, seeds, and plant parts in the basins when the basins are dry. Mammalian predator and raptor use of the basins would be similar to that described for other habitats of the planning area.

2.3.8 Waterway

The planning area contains portions of Sand Creek and three irrigation ditches: Tout Ditch, Bump and Edmiston Ditch, and Bowhay Ditch. All four waterways are engineered, earthen channels that appear to experience seasonal inundation, based on field characteristics and analysis of aerial imagery.

At the time of the field survey, Sand Creek was dry throughout its 2.9-mile length within the planning area and averaged 50 feet in width between bank tops. Its bed and banks supported a

mix of upland and wetland vegetation including nonnative grasses, California mugwort (*Artemisia douglasiana*), rough cocklebur (*Xanthium strumarium*), and curly dock. Where Sand Creek passed along the western edge of Cutler, it supported intermittent stands of riparian trees such as sandbar willow (*Salix exigua*) and Fremont cottonwood (*Populus fremontii*). Old cliff swallow (*Petrochelidon pyrrhonota*) nests were found under the bridge spanning the creek on Road 128. Tout Ditch, which travelled along the western edge of the planning area for approximately 1.4 miles, carried no flowing water at the time of the survey, but one or more pools of water remained in channel depressions. The ditch was sparsely vegetated with ruderal weed species and averaged 20 feet in width between bank tops. The Bump and Edmiston Ditch traversed the northwestern portion of the planning area both above and below ground, with aboveground reaches totaling 0.37 mile. The Bowhay Ditch ran along the eastern boundary of the planning area, passing through the planning area for a distance of approximately 0.25 mile in east Cutler. The latter two ditches were dry and sparsely vegetated at the time of the survey, and averaged 10 feet or less in width between bank tops.

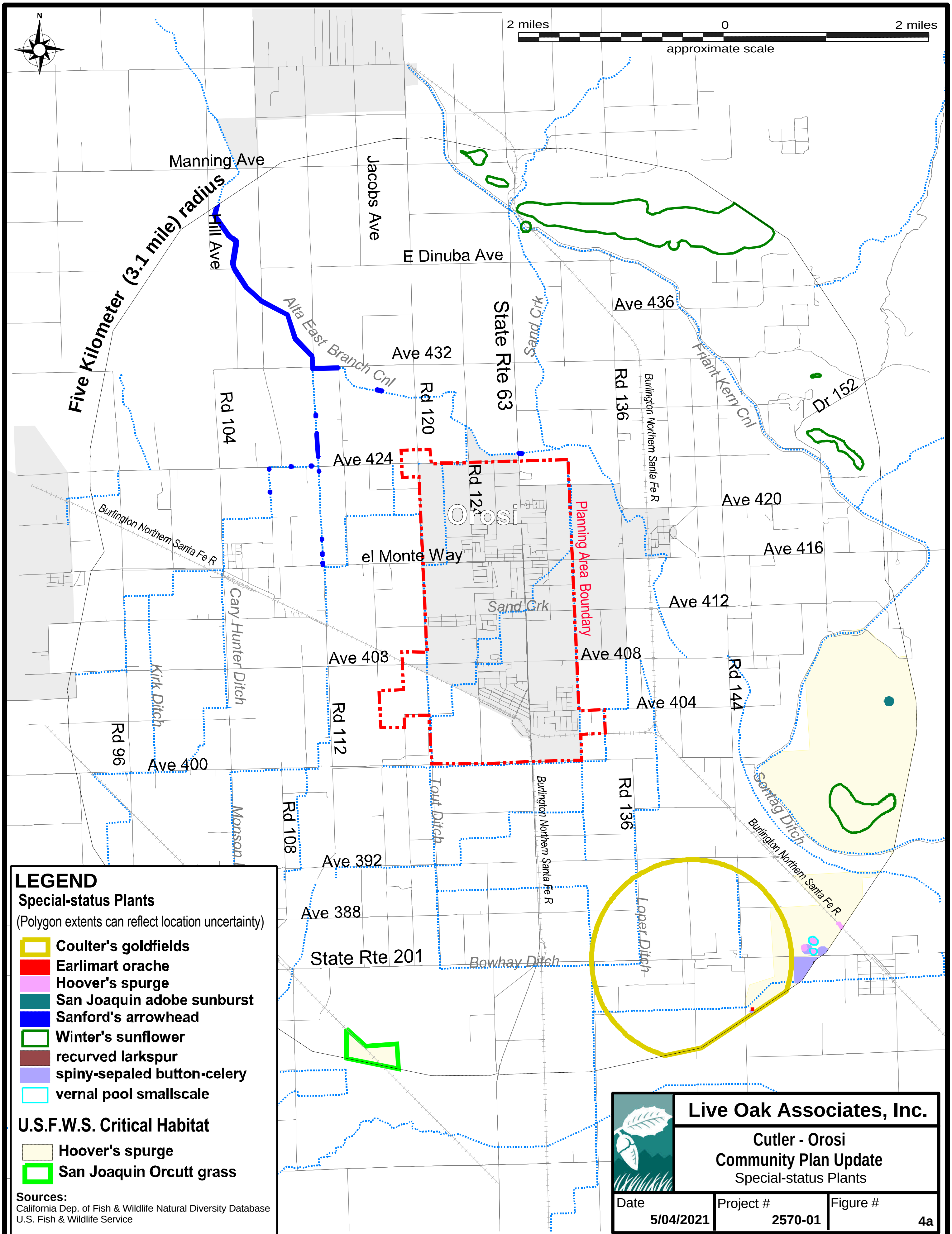
Wildlife use of the planning area's waterways would vary depending on the inundation regime. During inundated periods, the Sierran tree frog, western toad, and introduced American bullfrog could breed in these features. Inundated canals and ditches may also support mosquitofish, as observed in one of the siphons of Tout Ditch at the time of the field survey. These species, in turn, would attract common garter snakes and aquatic garter snakes (*Thamnophis atratus*) to forage in this habitat, along with wading birds such as the great blue heron and great egret.

2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species

legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."

A search of published accounts for all locally-occurring special status plant and animal species was conducted for the *Orange Cove South* USGS 7.5-minute quadrangle, in which the planning area occurs, and the eight surrounding quadrangles (*Wahtoke, Reedley, Traver, Monson, Ivanhoe, Stokes mtn, Tucker mtn,* and *Orange Cove North*) using the CNDDB Rarefind 5 (2021) program. These species, and their potential to occur within the planning area, are listed in Table 1 in the following pages and depicted in Figures 4a, 4b, and 5. Sources of information for Table 1 included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2021), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2021). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.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State Rte 63
Sand Crk
Ave 436
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Dr 152
Rd 104
Ave 424
Rd 124
Orosi
Planning Area Boundary
Ave 420
Burlington Northern Santa Fe R
el Monte Way
Ave 416
Cary Hunter Ditch
Sand Crk
Ave 412
Ave 408
Ave 408
Kirk Ditch
Rd 112
Ave 404
Rd 144
Rd 96
Ave 400
Tout Ditch
Burlington Northern Santa Fe R
Rd 136
Sontag Ditch
Monson
Rd 108
Ave 392
Burlington Northern Santa Fe R
Ave 388
Loper Ditch
State Rte 201
Bowhay Ditch
LEGEND
Special-status Plants
(Polygon extents can reflect location uncertainty)
Coulter's goldfields
Earlimart orache
Hoover's spurge
San Joaquin adobe sunburst
Sanford's arrowhead
Winter's sunflower
recurved larkspur
spiny-sepaled button-celery
vernal pool smallscale
U.S.F.W.S. Critical Habitat
Hoover's spurge
San Joaquin Orcutt grass
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service
Live Oak Associates, Inc.
Cutler - Orosi
Community Plan Update
Special-status Plants
Date
5/04/2021
Project #
2570-01
Figure #
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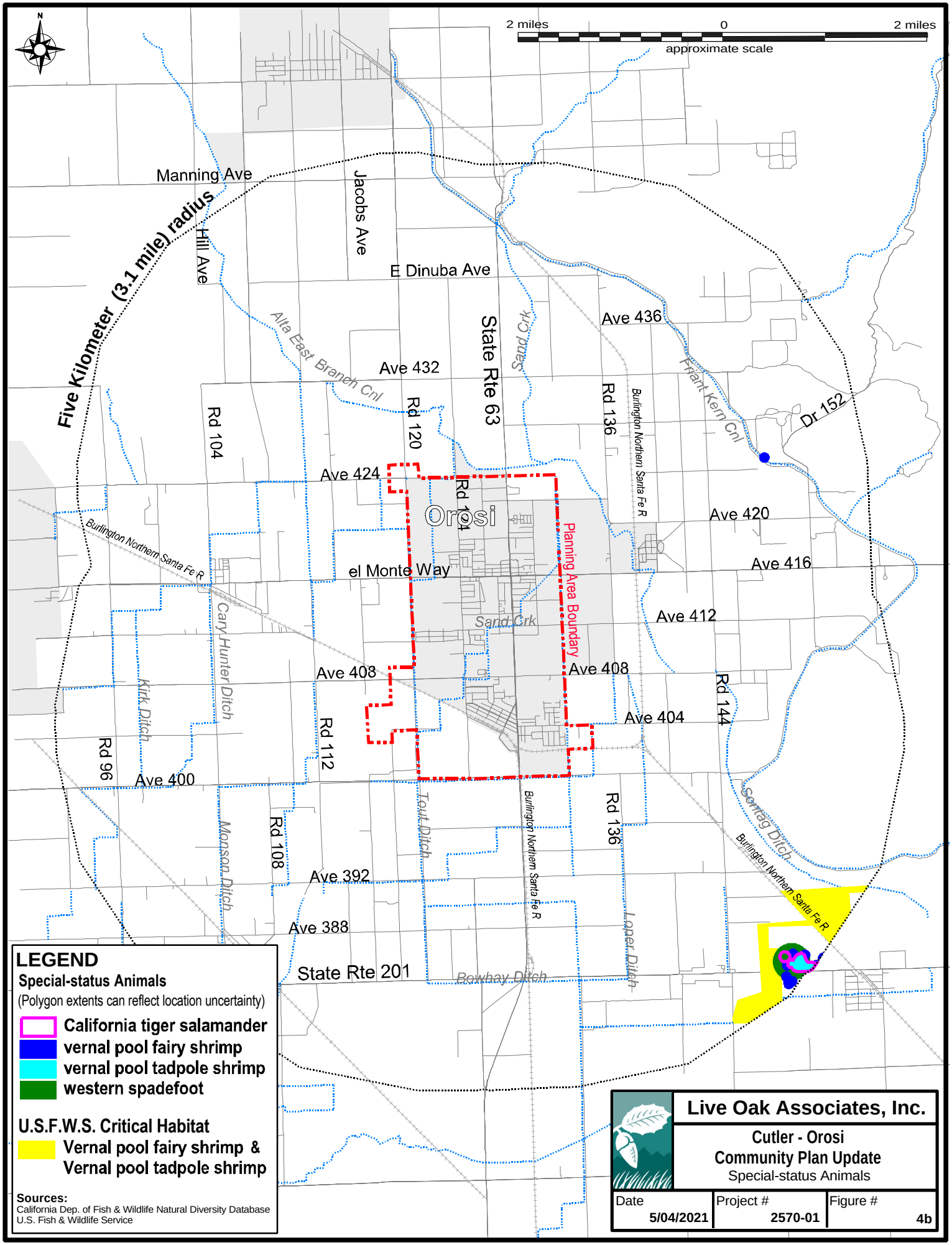
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approximate scale
Five Kilometer (3.1 mile) radius
Manning Ave
Hill Ave
Jacobs Ave
E Dinuba Ave
Alta East Branch Cnl
State Rte 63
Sand Crk
Ave 436
Ave 432
Rd 104
Rd 120
Rd 136
Burlington Northern Santa Fe R
Friant Kern Cnl
Dr 152
Ave 424
Rd 101
Orosi
Planning Area Boundary
Ave 420
Ave 416
el Monte Way
Ave 412
Ave 408
Ave 404
Rd 144
Rd 112
Rd 96
Ave 400
Kirk Ditch
Cary Hunter Ditch
Monson Ditch
Rd 108
Tout Ditch
Ave 392
Ave 388
State Rte 201
Bowhay Ditch
Lower Ditch
Santag Ditch
LEGEND
Special-status Animals
(Polygon extents can reflect location uncertainty)
California tiger salamander
vernal pool fairy shrimp
vernal pool tadpole shrimp
western spadefoot
U.S.F.W.S. Critical Habitat
Vernal pool fairy shrimp &
Vernal pool tadpole shrimp
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service
Live Oak Associates, Inc.
Cutler - Orosi
Community Plan Update
Special-status Animals
Date
5/04/2021
Project #
2570-01
Figure #
4b

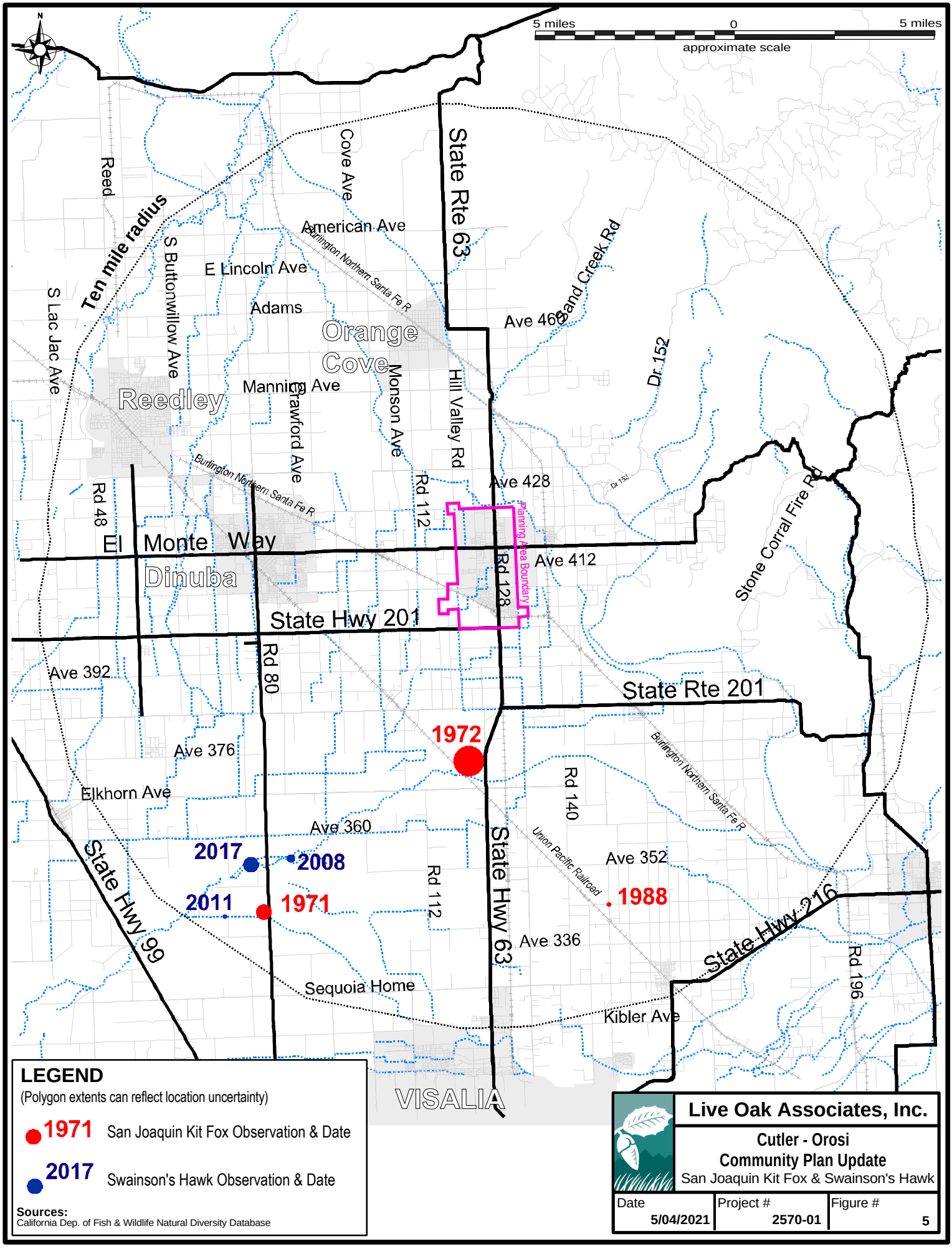
N
5 miles
0
5 miles
approximate scale
Ten mile radius
Reed
S Lac Jac Ave
S Buttonwillow Ave
Cove Ave
American Ave
E Lincoln Ave
Adams
Manning Ave
Crawford Ave
Monson Ave
Hill Valley Rd
State Rte 63
Sand Creek Rd
Dr 152
Ave 400
Ave 428
Ave 412
Ave 392
Ave 376
Ave 360
Ave 352
Ave 336
Rd 48
Rd 80
Rd 112
Rd 128
Rd 140
Rd 196
Reedley
Orange Cove
El Monte Way
Dinuba
State Hwy 201
State Rte 201
State Hwy 99
State Hwy 63
State Hwy 216
Elkhorn Ave
Sequoia Home
Kibler Ave
VISALIA
Planning Area Boundary
Stone Corral Fire Rd
Burlington Northern Santa Fe R
Union Pacific Railroad
1972
2017
2008
2011
1971
1988
LEGEND
(Polygon extents can reflect location uncertainty)
1971 San Joaquin Kit Fox Observation & Date
2017 Swainson's Hawk Observation & Date
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
Live Oak Associates, Inc.
Cutler - Orosi
Community Plan Update
San Joaquin Kit Fox & Swainson's Hawk
Date 5/04/2021
Project # 2570-01
Figure # 5

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

PLANTS (adapted from CDFW 2021 and CNPS 2021)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the Planning Area
Hoover's Spurge (*Euphorbia hooveri*)	FT CNPS 1B	This annual occurs in vernal pools of California's Central Valley; blooms July-September; elevation 80-820 ft.	**Absent.** Suitable vernal pool habitat is absent from the planning area, The nearest known populations of this species are approximately 3 miles southeast of the planning area, in natural lands associated with the Stone Corral Ecological Reserve (SCER). The nearest critical habitat for this species is located 1.8 miles southeast of the planning area.
San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)	FE, CE CNPS 1B	This annual occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation; blooms April-September; elevation 100-2,480 ft.	**Absent.** Suitable vernal pool habitat for the San Joaquin Valley orcutt grass is absent from the planning area. The closest documented occurrence of this species is approximately 6 miles south of the planning area, in SCER natural lands. The nearest critical habitat for this species is located 2.8 miles southwest of the planning area.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	**Unlikely.** Porterville clay soil is found on site in the northeast corner of the planning area, but this land is heavily altered by commercial citrus orchard operations and is unsuitable for this species. The closest documented occurrence is approximately 3 miles east of the planning area, in natural lands associated with Stokes Mountain.

CNPS-Listed Plants

Earlimart Orache (*Atriplex cordulata* var. *erecticaulis*)	CNPS 1B	This annual occurs in valley and foothill grasslands between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Historic and ongoing human disturbance of the planning area has rendered habitats unsuitable for this species. The nearest documented occurrence is 2.4 miles southeast of the planning area, in SCER natural lands.
Brittlescale (*Atriplex depressa*)	CNPS 1B	Occurs in alkali soils in barren areas within alkali grassland, meadow and scrub. Elevations up to 1,000 ft. Blooms April-October.	**Absent.** Suitable habitat and soils for this species are absent from the planning area.
Lesser Saltscale (*Atriplex minuscula*)	CNPS 1B	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils; blooms May-October; elevations below 700 ft.	**Absent.** Historic and ongoing human disturbance of the planning area has rendered habitats unsuitable for this species.
Vernal Pool Smallscale (*Atriplex persistens*)	CNPS 1B	This diminutive annual occurs in alkaline vernal pools; blooms July-October; elevations below 400 ft.	**Absent.** Suitable vernal pool habitat is absent from the planning area.
Recurved Larkspur (*Delphinium recurvatum*)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	**Absent.** Historic and ongoing human disturbance of the planning area has rendered habitats unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

PLANTS – cont'd

CNPS-Listed Plants

Species	Status	Habitat	Occurrence within the Planning Area
Kings River Buckwheat (Eriogonum nudum var. regirivum)	CNPS 1B	Occurs in cismontane woodland on rocky limestone slopes along the Kings River between 1,100 and 6,000 ft. in elevation. Blooms April-Nov.	**Absent.** The planning area does not contain suitable habitat for the Kings River buckwheat, and is located outside of this species' elevational range.
Spiny-Sepaled Button Celery (*Eryngium spinoseplaum*)	CNPS 1B	This species occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	**Absent.** Suitable vernal pool habitat for this species is absent from the planning area.
American Manna Grass (*Glyceria grandis*)	CNPS 2B	Occurs in bogs and fens, meadows and seeps, marshes and swamps, ditches, streams, and ponds, in valleys and lower elevations in the mountains between 200 and 6,700 ft. in elevation. Blooms June-Aug.	**Absent.** The planning area's ditches are highly maintained and unlikely to support this species. Moreover, local occurrences are over 100 years old and in mountainous habitat 14 and 17 miles to the northeast of the planning area.
Winter's Sunflower (*Helianthus winteri*)	CNPS 1B	Occurs in openings on relatively steep south-facing slopes in cismontane woodland and valley and foothill grassland habitat, often on roadsides; blooms Jan.-Dec.; 400 to 1,500 ft. in elevation.	**Absent.** Suitable habitat and topography are absent from the planning area.
California Satintail (*Imperata brevifolia*)	CNPS 2B	This perennial grass is found in scrubland and chaparral habitats where water is available, at elevations up to 4,000 feet. Blooms September-May.	**Absent.** Suitable habitat for this species is absent from the planning area.
Alkali-Sink Goldfields (*Lasthenia chrysantha*)	CNPS 1B	Endemic to California's Central Valley, where it grows in vernal pools and alkali flats. Blooms February-June.	**Absent.** Suitable habitat is absent from the planning area.
Coulter's Goldfields (*Lasthenia glabrata ssp. coulteri*)	CNPS 1B	Usually found on alkaline soils in playas, sinks, and grasslands at elevations below 4,500 feet. Blooms February-June.	**Absent.** Suitable habitat and soils are absent from the planning area.
California Alkali Grass (*Puccinellia simplex*)	CNPS 1B	Occurs in alkali sinks and flats within grassland and chenopod scrub habitats of the Central Valley, San Francisco Bay area and western Mojave Desert; elevations below 3,000 feet. Blooms March-May.	**Absent.** Suitable habitat and soils are absent from the planning area.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CNPS 1B	Occurs in freshwater marshes, swamps, and occasionally irrigation ditches in California's Central Valley; blooms May-October; elevation up to 2000 ft.	**Possible.** This species is known from the immediate vicinity of the planning area. A population was found in the Alta East Branch Canal, immediately north of planning area boundaries, in 2017, and several other populations have been documented in the Alta East Branch Canal, Monson Ditch, and Wilson Ditch within 1 mile of the planning area. Suitable habitat for this species exists within Sand Creek.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

ANIMALS (adapted from CDFW 2021)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the Planning Area
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Habitat suitable for this species is absent from the planning area.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools, but may use other seasonal wetlands in mesic valley and foothill grasslands.	**Absent.** Habitat suitable for this species is absent from the planning area.
Valley Elderberry Longhorn Beetle (VELB) (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills, generally along waterways and in floodplains.	**Absent.** The revised range of the valley elderberry longhorn beetle does not include Tulare County.
Foothill Yellow-legged Frog (*Rana boylii*)	CE, SSC	Occurs in rocky streams or pools in foothill woodlands or chaparral, with an isolated population on the floor of the Central Valley.	**Absent.** The planning area does not offer suitable habitat for this species.
California Tiger Salamander (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** Habitat suitable for breeding by CTS is absent from the planning area. Although rodent burrows theoretically suitable for CTS aestivation may occur throughout the planning area, the planning area consists of, and is surrounded by, a matrix of intensive anthropogenic uses incompatible with this species' ecological requirements, and CTS would not be able to persist here. The nearest documented occurrences are in the natural lands of the SCER, approximately 3 miles southeast of the planning area. The nearest critical habitat for this species is located 5.18 miles southwest of the planning area.
Swainson's Hawk (*Buteo swainsoni*)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Possible.** Swainson's hawks are relatively uncommon along the eastern edge of the San Joaquin Valley, where the planning area is situated. The closest known nesting occurrence is approximately 6 miles to the southwest (Hansen 2017), and no Swainson's hawks were observed during the survey. However, mature trees in rural portions of the planning area offer suitable nesting habitat for this species, and the planning area's agricultural fields and grassland/pasture habitats are suitable for foraging.
Willow Flycatcher (*Empidonax traillii*)	CE	Forages in dense willow-dominated riparian habitat, usually along rivers, streams, or other wetlands. Breeds at mid-high elevation in the Sierras.	**Absent.** Suitable riparian habitat for the willow flycatcher is absent from the planning area, and the site is located well outside of this species' breeding range.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

ANIMALS – cont'd.

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the Planning Area
Tricolored Blackbird (*Agelaius tricolor*)	CT	Breeds in fresh water with dense cattails, or thickets of willows or shrubs. Also known to breed in grain fields. Forages in grasslands and agricultural fields.	**Possible.** Although there are no known occurrences of the tricolored blackbird in the vicinity of the planning area, this species could conceivably forage in agricultural fields or grasslands/pastures of the planning area, and possibly nest in the fields when planted to a suitable substrate such as wheat or triticale.
San Joaquin Kit Fox (SJKF) (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (5 to 8 inches in diameter) ground squirrel burrows as denning habitat.	**Unlikely.** Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox occupation or use of the planning area and surrounding lands unlikely. There are only three known kit fox records within 10 miles of the planning area, all from the 1970s and 1980s.

ANIMALS – cont'd.

State Species of Special Concern or California Fully Protected

Western Pond Turtle (*Actinemys marmorata*)	CSC	Occurs in open slow-moving water or ponds with rocks and logs for basking. Nesting occurs in open areas, on a variety of soil types, and up to ¼ mile away from water.	**Possible.** Western pond turtles could potentially occur in the planning area's waterways and basins when inundated. Nesting or overwintering in the planning area is unlikely, as all habitats adjoining the planning area's aquatic habitats are highly modified and subject to ongoing disturbance.
Western Spadefoot (*Spea hammondii*)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	**Absent.** Suitable breeding habitat is absent from the planning area, and the highly modified landscape of the planning area is generally incompatible with the ecological requirements of this species. The closest known spadefoot occurrence is approximately 3 miles southeast of the planning area, in the natural lands of the SCER.
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Possible.** Although no burrowing owls or burrowing owl sign were observed during the field survey, this species has some potential to nest and roost in the planning area's grassland/pasture habitats and ruderal areas and to forage in the grasslands/pastures and agricultural fields. There are several documented burrowing owl occurrences within 5 miles of the planning area, all in natural lands.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE CUTLER-OROSI PLANNING AREA

ANIMALS – cont'd.

State Species of Special Concern or California Fully Protected

Species	Status	Habitat	Occurrence within the Planning Area
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and occasionally agricultural hedgerows.	**Possible.** Shrikes could forage in the planning area's agricultural fields, grassland/pasture habitats, and ruderal lands, and could nest in trees and shrubs in rural portions of the planning area.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats. Nests on the ground in high vegetation.	**Possible.** Northern harriers may occasionally forage in the agricultural fields and grassland/pasture habitats of the planning area. The planning area is unlikely to support nesting by this species.
White-Tailed Kite (*Elanus leucurus*)	CFP	Occurs in savanna, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	**Possible.** White-tailed kites may forage over the planning area's agricultural fields and grassland/pasture habitats, and may potentially nest in mature trees in rural portions of the planning area; however, no white-tailed kite individuals or nests were observed during the field surveys.
Golden Eagle (*Aquila chrysaetos*)	CFP	Inhabits a variety of habitats in California including forests, canyons, shrub lands, grasslands, and oak woodlands. Nests are constructed on platforms on steep cliffs or in large trees.	**Unlikely.** Golden eagles are known to occur in the foothills east of the planning area (eBird 2021) and may occasionally pass through the vicinity, but are not expected to utilize the planning area, where foraging habitat for this species is marginal and nesting habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** Individuals of this species could potentially roost in trees, bridges, or buildings in rural portions of the planning area, and forage in or over the planning area's agricultural fields, orchards, and grassland/pasture habitats. The nearest documented occurrence of the species is a roost site at a bridge over the Kings River, 10 miles west of the planning area.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Frequents open, semi-arid to arid habitats, including conifer, and deciduous woodlands, coastal scrub, grasslands, palm oasis, chaparral and urban. Roosts in cliff faces, high buildings, and tunnels.	**Possible.** This species is unlikely to roost within the planning area, but may potentially forage in flight over the planning area.
American Badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Unlikely.** Intensive agricultural practices, highly modified habitats, and ongoing disturbance make badger use of the planning area unlikely. There are no CNDDB records of the species in the vicinity of the planning area.

EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present:	Species observed on the site at time of field survey or during recent past
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CCT	California Threatened (Candidate)
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern

CNPS LISTING

1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION

2.5.1 California Tiger Salamander and Western Spadefoot

Ecology of the species. The California tiger salamander (CTS) *(Ambystoma californiense)* is listed as state and federally threatened. The CTS occurs in areas within Madera, Fresno, and Tulare Counties where vernal pool complexes are located within extensive grassland habitats. Vernal pools that hold water for 3-4 months of the winter and spring provide likely breeding habitat for the CTS. The CTS larvae mature in these vernal pools as they begin to dry in April and May. The young adult CTS leave the drying pools to find the burrows of California ground squirrels and pocket gophers in which to aestivate (oversummer). While CTS may wander a mile or more from the biological evaluation breeding habitat in search of aestivation habitat, studies of CTS aestivation indicate that 95% of all postbreeding adult salamanders aestivate within 0.4 mile of breeding habitat (Trenham and Shaffer 2005).

The western spadefoot *(Spea hammondii)* was historically found in California throughout the Central Valley, in the Coast Ranges and coastal lowlands from San Francisco Bay to Mexico. This species has been extirpated from many historic locations due to loss of the habitat it requires—vernal pools associated with chaparral, short grass plains, and coastal sage scrub—and is now listed as a California Species of Special Concern.

The western spadefoot typically breeds between January and May in seasonal ponds occurring in chaparral, short grass plains or coastal sage scrub. For the larvae to survive, development must be complete before the ponds dry. Mostly active at night, the spadefoot has adapted to digging in sandy soils and finding refugia in small mammal burrows, creating aestivation habitat that protects it from hot, arid daytime conditions. This species may be inactive for periods of eight to nine months and may not reach maturity for two years. Little is known about the distance that the western spadefoot ranges from aquatic habitat for dispersal and aestivation, but current research suggests the species typically remains within 1,200 feet of aquatic habitat (Semlitsch and Brodie 2003).

Potential to occur onsite. The planning area encompasses a mosaic of agricultural, urban, and rural developed land uses generally not compatible with CTS or western spadefoot life history and habitat requirements. Vernal pools are absent. The planning area contains a number of human-constructed basins used for stormwater detention, wastewater treatment, and agricultural purposes; none appear to have an inundation regime that would support breeding by the CTS or western spadefoot, and those basins that are permanently inundated are expected to be unsuitable due to the presence of bullfrogs and other predators. Lands surrounding the planning area within the 1.3-mile maximum distance that CTS have been documented from breeding habitat (Orloff 2011) comprise a mixture of intensive orchard, agricultural, and developed uses similar to those of the planning area, and do not appear to include any remnant grassland habitats within which CTS or spadefoot could persist. Given the apparent absence of breeding habitat and the general unsuitability of the planning area and surrounding lands for CTS and spadefoot, these species are considered absent.

2.5.2 Swainson's Hawk

Ecology of the species. Swainson's hawks (*Buteo swainsoni*) are large, long-winged, broad-tailed hawks with a high degree of mate and territorial fidelity. They are breeding season migrants to California, arriving at their nesting sites in March or April. The young hatch sometime between March and July and fledge 4 to 6 weeks later. By October, most birds have left for wintering grounds in South America. In the Central Valley, Swainson's hawks typically nest in large trees along riparian systems, but may also nest in oak groves, or lone, mature trees

in agricultural fields or along roadsides. Nest sites are typically located adjacent to suitable foraging habitat. Swainson's hawks forage in large, open fields with abundant prey, including grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row crops, primarily during or immediately after harvest (Estep 1989, Estep and Dinsdale 2012). Their designation as a California Threatened species is based on population decline due in part to loss of foraging habitat to urban development (CDFG 1994).

Potential to occur onsite. Swainson's hawks are relatively uncommon along the eastern margin of the San Joaquin Valley, where the planning area is located. The CNDDB lists only three nesting occurrences within 10 miles of the planning area, all located at distances of 7 to 9 miles to the southwest (Figure 5). A fourth nesting occurrence was documented approximately 6 miles southwest of the planning area by ornithologist Rob Hansen (Hansen 2017). Notwithstanding the limited presence of Swainson's hawks in the vicinity, the planning area contains suitable habitat for this species, and it is possible that Swainson's hawks occur, or could at some point in the future, occur here. Suitable nesting habitat includes the scattered trees in the non-native grassland along Railroad Drive and the many shade trees planted in rural developed areas. Suitable foraging habitat includes the planning area's grassland/pasture habitats and agricultural fields, particularly when the fields are planted to a suitable cover type such as alfalfa or wheat.

2.5.3 San Joaquin Kit Fox

Ecology of the species. By the time the San Joaquin kit fox (SJKF) (*Vulpes macrotis mutica*) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. The San Joaquin kit fox does not appear to have ever been common in the vicinity of the planning area; the CNDDB lists only three occurrences within 10 miles of planning area boundaries, all from the 1970s and 1980s. The planning area consists overwhelmingly of urban areas and intensively-managed agricultural lands unsuitable for kit fox denning, and marginal to unsuitable for foraging due to ongoing human disturbance, limited prey base, and/or incompatible vegetative cover type. Lands surrounding the planning area are characterized by similar anthropogenic uses and also appear unsuitable for this species. Moreover, the planning area is located more than 60 miles from the nearest SJKF core population in the Ciervo-Panoche region, and 40-50 miles from the nearest extant satellite populations in southwestern Fresno, Kings, and Tulare Counties. For these reasons, the kit fox is considered unlikely to occur within the planning area.

2.6 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the CDFW, and the Regional Water Quality Control Board (RWQCB). See Section 3.2.7 of this report for additional information.

As discussed, the planning area contains portions of four waterways: Sand Creek, Tout Ditch, Bump and Edmiston Ditch, and Bowhay Ditch. Sand Creek originates in the foothills of the

Sierra Nevada, generally north of the planning area. It travels diagonally across the planning area in an engineered, earthen channel for approximately 2.9 miles, entering the site near Avenue 416 in the northeast and exiting the site near Avenue 404 in the southwest. Downstream of the planning area, it flows south and west for approximately 5 miles before entering Cottonwood Creek. Cottonwood Creek, in turn, feeds Cross Creek, which feeds the Tule River. Sand Creek is an ephemeral stream that conveys local storm water runoff (Tulare County 2020), and under the new Navigable Waters Protection Rule, ephemeral streams do not meet the definition of Waters of the U.S. However, because Sand Creek is hydrologically connected to known Waters of the U.S., there is some chance that it will be claimed by the USACE. Regardless of whether Sand Creek meets the definition of a Water of the U.S., it is expected to be claimed by the RWQCB and CDFW.

The three irrigation ditches are unlikely to be considered Waters of the U.S. under the new Navigable Waters Protection Rule because they were not constructed in, nor do they serve to relocate, jurisdictional streams or wetlands. They are also unlikely to be claimed by CDFW, as they do not replace natural drainages and do not support riparian vegetation. The RWQCB may assert jurisdiction over these ditches, however.

The planning area's artificial ponds/basins do not meet the definition of Waters of the U.S., and would not be claimed by CDFW, but may be regulated by the RWQCB.

2.7 DESIGNATED CRITICAL HABITAT

The USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the planning area. The nearest units of critical habitat are located approximately 1.8 miles southeast, 2.8 miles southwest, and 5.18 miles southwest of the planning area. These units are designated for the protection of Hoover's spurge, San Joaquin Orcutt grass, and California tiger salamander, respectively.

2.8 SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 or lower (on a 1 to 5 scale) is considered sensitive. Examples of sensitive natural communities in the vicinity of the planning area include vernal pools and various types of riparian forest (Sawyer, Keeler-Wolf and Evens 2012).

The planning area's vegetation associations are highly modified and most are dominated by non-native species. None of the planning area's habitats appear to meet the criteria for a sensitive natural community.

2.9 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. It is possible that Sand Creek may serve as a movement corridor for urban-adapted species like coyotes, striped skunks, raccoons, and Virginia opossums, as it is a wide channel that supports occasional thickets of riparian vegetation. The remaining three ditches that pass through the planning area are devoid of riparian vegetation and are therefore unsuitable for movement corridors. Additionally, the Pacific flyway, one of four major bird migration routes in North America, passes over the planning area and much of the rest of California.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

In California, any project carried out or approved by a public agency that will result in a direct or reasonably foreseeable indirect physical change in the environment must comply with CEQA. The purpose of CEQA is to ensure that a project's potential impacts on the environment are evaluated, and methods for avoiding or reducing these impacts are considered, before the project is allowed to move forward. A secondary aim of CEQA is to provide justification to the public for the approval of any projects involving significant impacts on the environment.

According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest." Although the lead agency may set its own CEQA significance thresholds, project impacts to biological resources are generally considered to be significant if they would meet any of the following criteria established in Appendix G of the CEQA Guidelines:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) requires the lead agency to make "mandatory findings of significance" if there is substantial evidence that a project may:

- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare or threatened species.

- Achieve short-term environmental goals to the detriment of long-term environmental goals.

- Produce environmental effects that are individually limited but cumulatively considerable, meaning that the incremental effects of the project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects.

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 General Plan Policies of County of Tulare

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The Tulare County General Plan released an update in 2012 that is valid through 2030. Implementation of goals in the Tulare County General Plan is accomplished via a set of policies specific to each goal.

Relevant biological resource goals of the Tulare County General Plan include:

- protecting rare and endangered species;

- limiting development in environmentally sensitive areas;

- encouraging cluster development in areas with moderate to high potential for sensitive habitat;

- encouraging the planting of native trees, shrubs, and grasslands preserve;

- requiring open space buffers between development projects and significant watercourse, riparian vegetation, wetlands, and other sensitive habitats and natural communities;

- coordinating with other government land management agencies to preserve and protect biological resources;
- encouraging appropriate access to resource-managed lands;
- providing opportunities for hunting and fishing activities;
- implementing pesticide controls to limit effects on natural resources; and
- supporting the establishment and administration of a mitigation banking program.

3.2.2 Threatened and Endangered Species

In California, imperiled plants and animals may be afforded special legal protections under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA). Species may be listed as "threatened" or "endangered" under one or both Acts, and/or as "rare" under CESA. Under both Acts, "endangered" means a species is in danger of extinction throughout all or a significant portion of its range, and "threatened" means a species is likely to become endangered within the foreseeable future. Under CESA, "rare" means a species may become endangered if their present environment worsens. Both Acts prohibit "take" of listed species, defined under CESA as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86), and more broadly defined under FESA to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3).

When state and federally listed species have the potential to be impacted by a project, the USFWS and CDFW must be included in the CEQA process. These agencies review the environmental document to determine the adequacy of its treatment of endangered species issues and to make project-specific recommendations for the protection of listed species. Projects that may result in the "take" of listed species must generally enter into consultation with the USFWS and/or CDFW pursuant to FESA and CESA, respectively. In some cases, incidental take authorization(s) from these agencies may be required before the project can be implemented.

3.2.3 California Fully Protected Species

The classification of certain animal species as "fully protected" was the State of California's initial effort in the 1960s, prior to the passage of the California Endangered Species Act, to

identify and provide additional protection to those species that were rare or faced possible extinction. Following CESA enactment in 1970, many fully protected species were also listed as California threatened or endangered. The list of fully protected species are identified, and their protections stipulated, in California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and fish (5515). Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except in conjunction with necessary scientific research and protection of livestock.

3.2.4 Habitat Conservation Plans and Natural Community Conservation Plans

Section 10 of the federal Endangered Species Act establishes a process by which non-federal projects can obtain authorization to incidentally take listed species, provided take is minimized and thoroughly mitigated. A Habitat Conservation Plan (HCP), developed by the project applicant in collaboration with the USFWS and/or NMFS, ensures that such minimization and mitigation will occur, and is a prerequisite to the issuance of a federal incidental take permit. Similarly, a Natural Community Conservation Plan (NCCP), developed by the project applicant in collaboration with CDFW, provides for the conservation of biodiversity within a project area, and permits limited incidental take of state-listed species.

3.2.5 Designated Critical Habitat

The USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as "(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species." The Act goes on to define "conservation" as "the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary."

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species' "primary constituent elements," or physical or biological features of the landscape that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.2.6 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs.

Native birds are also protected under California state law. The California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities. Moreover, the California Migratory Bird Protection Act, enacted in September 2019, clarifies native bird protection and increases protections where California law previously deferred to federal law.

3.2.7 Birds of Prey

Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The

bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

3.2.8 Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.2.9 Wetlands and Other Jurisdictional Waters

The USACE regulates the filling or grading of waters of the U.S. under the authority of Section 404 of the Clean Water Act (CWA). Drainage channels and adjacent wetlands may be considered "waters of the United States" or "jurisdictional waters" subject to the jurisdiction of the USACE.

Waters of the U.S. are defined by the Navigable Waters Protection Rule. The new rule was published in the Federal Register on April 21, 2020, and took effect on June 22, 2020.

The Navigable Waters Protection Rule (33 CFR Part 328) identifies four categories of Waters of the U.S.: (1) territorial seas and traditional navigable waters, (2) tributaries, (3) lakes, ponds, and impoundments of jurisdictional waters, and (4) adjacent wetlands. These categories are defined as follows:

<u>Territorial Seas and Traditional Navigable Waters (TNWs)</u>

- The territorial seas and traditional navigable waters include large rivers and lakes and tidally-influenced waterbodies used in interstate or foreign commerce.

<u>Tributaries</u>

- Tributaries include perennial and intermittent rivers and streams that contribute surface flow to traditional navigable waters in a typical year. These naturally occurring surface water channels must flow more often than just after a single precipitation event—that is, tributaries must be perennial or intermittent.

- Tributaries can connect to a traditional navigable water or territorial sea in a typical year either directly or through other "waters of the United States," through channelized non-jurisdictional surface waters, through artificial features (including culverts and spillways), or through natural features (including debris piles and boulder fields).

- Ditches are to be considered tributaries only where they satisfy the flow conditions of the perennial and intermittent tributary definition and either were constructed in or relocate a tributary or were constructed in an adjacent wetland and contribute perennial or intermittent flow to a traditional navigable water in a typical year.

Lakes, Ponds, and Impoundments of Jurisdictional Waters

- Lakes, ponds, and impoundments of jurisdictional waters are jurisdictional where they contribute surface water flow to a traditional navigable water or territorial sea in a typical year either directly or through other "waters of the United States," through channelized non-jurisdictional surface waters, through artificial features (including culverts and spillways), or through natural features (including debris piles and boulder fields).

- Lakes, ponds, and impoundments of jurisdictional waters are also jurisdictional where they are flooded by a "water of the United States" in a typical year, such as certain oxbow lakes that lie along the Mississippi River.

Adjacent Wetlands

- Wetlands that physically touch other jurisdictional waters are "adjacent wetlands,"

- Wetlands separated from a "water of the United States" by only a natural berm, bank or dune are also "adjacent."

- Wetlands inundated by flooding from a "water of the United States" in a typical year are "adjacent."

- Wetlands that are physically separated from a jurisdictional water by an artificial dike, barrier, or similar artificial structure are "adjacent" so long as that structure allows for a direct hydrologic surface connection between the wetlands and the jurisdictional water in a typical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature.

- An adjacent wetland is jurisdictional in its entirety when a road or similar artificial structure divides the wetland, as long as the structure allows for a direct hydrologic surface connection through or over that structure in a typical year.

The final rule also outlines what are not "waters of the United States." The following waters/features are not jurisdictional under the rule:

- Waterbodies that are not included in the four categories of "waters of the United States" listed above.

- Groundwater, including groundwater drained through subsurface drainage systems, such as drains in agricultural lands.

- Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools.

- Diffuse stormwater run-off and directional sheet flow over upland.

- Many farm and roadside ditches.

- Prior converted cropland retains its longstanding exclusion, but is defined for the first time in the final rule. The agencies are clarifying that this exclusion will cease to apply when cropland is abandoned (i.e., not used for, or in support of, agricultural purposes in the immediately preceding five years) and has reverted to wetlands.

- Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease.

- Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters.

- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel.

- Stormwater control features excavated or constructed in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off.

- Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention and infiltration basins and ponds, that are constructed in upland or in non-jurisdictional waters.

- Waste treatment systems have been excluded from the definition of "waters of the United States" since 1979 and will continue to be excluded under the final rule. Waste treatment systems include all components, including lagoons and treatment ponds (such as settling or cooling ponds), designed to either convey or retain, concentrate, settle, reduce, or remove pollutants, either actively or passively, from wastewater or stormwater prior to discharge (or eliminating any such discharge).

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland

functions or values. No permit can be issued until the RWQCB issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("Waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders. Discharges into waters of the State that are also waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also waters of the U.S., require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one or more acres of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a water of the U.S. may require a NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The 2020 Cutler-Orosi Community Plan provides a framework for sustainable growth within a 3,154-acre planning area that, at present, contains extensive agricultural and other undeveloped land. It is assumed that, by 2030, some or all of these lands will be converted to residential, commercial, and industrial uses to accommodate projected growth.

As discussed, certain regionally-occurring special status species have the potential to occur in the planning area. However, the planning area is not uniformly suitable for such species; rather, it contains a range of habitats and land use types, only some of which may support special status species. In general, special status species occurrence within the planning area is expected to be limited to rural areas, and may further be influenced by the presence of certain habitat components such as grassland or hydrologic features.

In the following discussions of potential impacts to sensitive biological resources associated with future development of the planning area, the planning area has been divided into two main zones, urban and rural. *Urban* includes all lands under significant influence of the urban environment, identified as those within the urban/rural boundary depicted in Figure 3. *Rural* includes all lands outside of the urban/rural boundary depicted in Figure 3. Impacts to specific biological resources have been evaluated for each zone. Evaluation of impacts by zones was undertaken to aid County planners in their consideration of potential impacts to sensitive or protected biological resources when considering certain areas for future projects and growth.

3.3.1 Construction-Related Loss of Sanford's Arrowhead

Potential Impacts. This species may occur in the planning area's earthen canals and ditches. Future projects that impact these habitats may eliminate an as-yet-unknown population of this sensitive plant species, which would be considered a significant impact under CEQA.

Mitigation. The following mitigation measures are required for projects in either the urban or rural zone that will directly impact canals or ditches (see "Waterway" on Figure 3).

Mitigation Measure 3.3.1a (Preconstruction Surveys). Prior to construction activities in the planning area's canals and ditches, a qualified biologist will conduct a preconstruction survey for the Sanford's arrowhead during the May-October blooming period for this species.

Mitigation Measure 3.3.1b (Avoidance). If a Sanford's arrowhead population is identified within the construction zone, it will be avoided by a minimum distance of 50 feet if possible. The avoidance area will be identified on the ground with construction fencing, brightly-colored flagging, or other easily visible means.

Mitigation Measure 3.3.1c (Salvage). If it is not possible to avoid populations of Sanford's arrowhead identified within construction zones, a qualified biologist will remove all individual plants to be impacted and relocate them to a suitable portion of the waterway that is nearby but will not be impacted.

Implementation of the above measures will reduce potential project impacts to the Sanford's arrowhead to a less than significant level under CEQA.

3.3.2 Construction-Related Mortality of the Western Pond Turtle

Potential Impacts. This species may occur in inundated waterways in both urban and rural portions of the planning area. Within the rural zone, it also has the potential to occur in inundated basins. Projects that will directly impact these habitats have the potential to result in injury or mortality of western pond turtle individuals, which would be considered a significant impact under CEQA.

Mitigation. The following mitigation measure is required for projects that will directly impact inundated canals or ditches (see "Waterway" on Figure 3) or inundated basins (see "Artificial Pond/Basin" in Figure 3) in either the urban or rural zone.

Mitigation Measure 3.3.2a (Preconstruction Surveys). Preconstruction surveys for western pond turtles must be conducted within 24 hours prior to the start of construction activities in inundated canals, ditches, and basins in the planning area. These surveys will encompass all aquatic habitat and surrounding uplands within 100 feet that are proposed for impact. Any turtles that are discovered during the preconstruction surveys will be relocated to similar habitat outside of the impact area.

Implementation of the above measures will reduce potential project impacts to the western pond turtle to a less than significant level under CEQA.

3.3.3 Project-Related Impacts to Swainson's Hawk

Potential Impacts. This species has the potential to nest in mature trees in the rural zone, and to forage in the rural zone's agricultural fields and grassland/pasture habitats. Future construction activities that will remove mature trees in the rural zone have the potential to directly impact Swainson's hawk nests, in which case eggs or nestlings may be destroyed. Future construction activities that will occur in close proximity to mature trees in the rural zone have the potential to disturb nesting Swainson's hawks such that they would abandon their nests. Construction-related mortality/disturbance of nesting Swainson's hawks would be considered a significant impact under CEQA.

Should one or more Swainson's hawk pairs establish nests within the planning area or adjacent lands, then nesting individuals may be sensitive to the loss of foraging habitat in the planning area. Dominated as the planning area is by orchard/vineyard uses and urban lands, the sparse distribution of agricultural fields and grassland/pasture habitat in the rural zone would be uniquely valuable to any Swainson's hawks nesting nearby, and the loss of these lands may adversely affect individuals of this species. This would be considered a significant impact under CEQA.

Swainson's hawks are not expected to occur in the planning area's urban zone. Impacts to the Swainson's hawk associated with future projects in the urban zone are considered less than significant under CEQA.

Mitigation. The following mitigation measures are required for future projects in the planning area's rural zone.

> ***Mitigation Measure 3.3.3a* (*Temporal Avoidance*).** In order to avoid impacts to nesting Swainson's hawks, construction activities in the rural zone will occur, where possible, outside the nesting season, typically defined as March 1-September 15.
>
> ***Mitigation Measure 3.3.3b (Preconstruction Surveys).*** If construction activities in the rural zone must occur between March 1 and September 15, a qualified biologist will conduct preconstruction nest surveys for Swainson's hawks on and within ½ mile of the work area within 30 days prior to the start of construction. The survey will consist of inspecting all accessible, suitable trees of the survey area for the presence of nests and hawks.

Mitigation Measure 3.3.3c (Avoidance of Active Nests). Should any active Swainson's hawk nests be discovered within the survey area, the observation will be submitted to the CNDDB, and an appropriate disturbance-free buffer will be established around the nest based on local conditions and agency guidelines. Disturbance-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until a qualified biologist has determined that the young have fledged and are capable of foraging independently.

Mitigation Measure 3.3.3d (Compensatory Mitigation). Projects in the rural zone that will remove agricultural fields or grassland within ½ mile of a documented Swainson's hawk nest (based on concurrent Mitigation Measure 3.3.3b surveys, if applicable, and/or on a CNDDB query) will provide compensatory mitigation at a 1:1 ratio for the loss of potential Swainson's hawk foraging habitat. Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the vicinity, to be preserved in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved Swainson's hawk conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2.

Implementation of the above measures will reduce potential project impacts to the Swainson's hawk to a less than significant level under CEQA and will ensure that future projects are in compliance with state laws protecting this species.

3.3.4 Project-Related Impacts to the Burrowing Owl

Potential Impacts. As discussed in Section 2.5.4, burrowing owls have the potential to nest and roost in grassland and ruderal habitat of the rural zone, and to forage in the rural zone's grasslands and agricultural fields. If burrowing owls are nesting or roosting on site at the time of future construction activities, they could be at risk of construction-related injury or mortality. Such individuals may also be adversely affected from loss of habitat because, with all portions of the planning area subject to development under the 2020 Cutler-Orosi Community Plan, it cannot be assumed that displaced owls would simply move to intact adjacent habitat. Project-related burrowing owl mortality and loss of occupied burrowing owl habitat would both be considered significant impacts under CEQA. Project-related mortality of burrowing owls would also violate state and federal law.

Burrowing owls are not expected to occur in the planning area's urban areas. Impacts to the burrowing owl associated with future projects in the urban zone are considered less than significant under CEQA.

Mitigation. The following mitigation measures are required for future projects in ruderal habitat (see "Ruderal" on Figure 3) or grassland/pasture habitat (see "Grassland/Pasture" on Figure 3) in the rural zone of the planning area.

> ***Mitigation Measure 3.3.4a (Take Avoidance Survey).*** A preconstruction "take avoidance" survey for burrowing owls will be conducted by a qualified biologist within 30 days prior to the start of construction according to methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The survey area will include all suitable habitat on and within 200 meters of the construction zone, where accessible.
>
> ***Mitigation Measure 3.3.4b (Avoidance of Active Nests).*** If construction activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near the construction zone, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.
>
> ***Mitigation Measure 3.3.4c (Avoidance or Passive Relocation of Resident Owls).*** During the non-breeding season (September 1-January 31), resident owls occupying burrows in the construction zone may either be avoided, or passively relocated to alternative habitat. If the project applicant chooses to avoid active owl burrows within the construction zone during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing and will remain in place until a qualified biologist determines that the burrows are no longer active. If the project applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.
>
> ***Mitigation Measure 3.3.4d (Compensatory Mitigation).*** The project applicant will provide compensatory mitigation, at a 1:1 ratio, for all potential burrowing owl habitat removed within 600 meters of active burrowing owl burrows, as identified during the preconstruction surveys provided for in Mitigation Measure 3.3.4b. Potential burrowing owl habitat in the planning area generally includes agricultural fields (suitable for foraging), ruderal habitat (suitable for nesting), and non-native grassland habitat (suitable for nesting or foraging). Compensatory mitigation will entail one of the following options: (1) acquiring suitable replacement habitat in the project vicinity, to be preserved

in perpetuity under conservation easement and managed according to the provisions of a long-term management plan, (2) purchasing credits at a CDFW-approved burrowing owl conservation bank, or (3) a different mitigation scheme developed in consultation with CDFW, possibly including a combination of options 1 and 2.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level under CEQA and will ensure that future projects are in compliance with state laws protecting this species.

3.3.5 Construction-Related Mortality of Nesting Migratory Birds and Raptors (including Tricolored Blackbird, White-tailed Kite, and Loggerhead Shrike)

Potential Impacts. Both the urban and rural zones of the planning area contain habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. For example, orchards may be used by common tree-nesting species such as the American robin and mourning dove. Mature trees in the rural zone may be used by red-tailed hawks and other tree-nesting raptors. The western meadowlark may nest on the ground in grassland habitats of the rural zone, and the disturbance-tolerant killdeer may nest in ruderal areas of either zone. Other likely urban zone nesters include the house finch, which often nests on or around buildings, and the northern mockingbird, common in residential neighborhoods.

Certain habitats of the rural zone have the potential to be used for nesting by special status avian species including the tricolored blackbird, white-tailed kite, and loggerhead shrike. Tricolored blackbirds may nest in the planning area's agricultural fields when planted to a suitable substrate such as wheat or triticale. White-tailed kites may nest in mature trees associated with the planning area's rural developed lands, or found along ruderal roadsides. Loggerhead shrikes may nest in trees or shrubs throughout the rural zone.

Any raptors and migratory birds that are nesting within or near work areas at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project-

related injury or mortality of nesting raptors and migratory birds would violate state and federal laws, and is considered a potentially significant impact under CEQA.

Mitigation. The following measures will be implemented prior to the start of project activities within the planning area.

> ***Mitigation Measure 3.3.5a (Avoidance).*** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the planning area will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.
>
> ***Mitigation Measure 3.3.5b (Preconstruction Surveys).*** If construction must occur between February 1 and August 31, a qualified biologist will conduct preconstruction surveys for active migratory bird nests within 14 days prior to the start of work. For projects within the urban zone, the survey area will encompass the work area and accessible surrounding lands within 100 feet. For projects within the rural zone, the survey area will encompass the work area and accessible surrounding lands within 300 feet.
>
> ***Mitigation Measure 3.3.5c (Establish Buffers).*** Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds, including tricolored blackbirds, white-tailed kites, and loggerhead shrikes, to a less than significant level under CEQA and will ensure that future development activities within the planning area remain in compliance with state and federal laws protecting these species.

3.3.6 Construction-Related Mortality of the Pallid Bat and Other Roosting Bats

Potential Impacts. The planning area's rural zone contains buildings, bridges, and large trees suitable for roosting by a variety of native bat species including the pallid bat (*Antrozous pallidus*), a California Species of Special Concern. Buildings, bridges, and large trees of the urban zone, while unlikely to be used by the pallid bat (Avila-Flores and Fenton 2005, Miner and Stokes 2005), may be used for roosting by common species such as the big brown bat (*Eptesicus fuscus*) and Brazilian free-tailed bat (*Tadarida brasiliensis*).

Future projects that remove buildings, bridges, or large trees have the potential to impact any bats roosting within. If bat maternity colonies are present, many individual bats could be killed. Such a mortality event would be considered a significant impact of the project under CEQA.

Mitigation. The following measures are required for all future projects in the planning area that will remove buildings, bridges, or large trees.

> ***Mitigation Measure 3.3.6a (Temporal Avoidance).*** To avoid potential impacts to maternity bat roosts, removal of buildings, bridges, and large trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.
>
> ***Mitigation Measure 3.3.6b (Preconstruction Surveys).*** If removal of buildings, bridges, or large trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.
>
> ***Mitigation Measure 3.3.6c (Minimization).*** If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.
>
> ***Mitigation Measure 3.3.6d (Avoidance of Maternity Roosts)***. If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.

Implementation of the above measures will reduce potential impacts associated with construction-related mortality of roosting pallid bats and other native bat species to a less than significant level under CEQA.

3.3.7 Project-Related Impacts to Riparian Habitat

Potential Impacts. As discussed, where Sand Creek passes through west Cutler, it supports localized stands of sandbar willow and Fremont cottonwood. This habitat has been degraded by channel maintenance activities and urban influences, and is not considered a sensitive natural community. However, where native riparian trees remain in the Central Valley, they play an

important role in conserving California's flora and fauna, many species of which are only found in riparian systems. Project-related loss of native riparian trees would contribute to the decline of riparian forests in the Central Valley and be considered a significant impact under CEQA.

Mitigation. The following measures are required for any future projects that will impact riparian vegetation along Sand Creek.

> ***Mitigation Measure 3.3.7a. (Tree Survey).*** Prior to project construction, a qualified biologist will survey all areas of riparian vegetation to be impacted, and will record the species, location, and diameter at breast height (DBH) of each native tree. Upon project completion, a qualified biologist will survey the site to determine if any surveyed trees were removed.
>
> ***Mitigation Measure 3.3.7b. (Revegetation).*** The project applicant will provide compensation for removal of any native riparian trees. Replacement plantings will be installed at a ratio of 3:1 for trees with a DBH between 4 and 24 inches, and at a ratio of 10:1 for trees with a DBH greater than 24 inches. A revegetation plan will be prepared for the project that will prescribe methods for planting, irrigating, and maintaining the replacement trees and identify the success criteria for the revegetation effort.

Implementation of these measures will reduce project-related impacts to riparian habitat to a less than significant level under CEQA.

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Project-Related Impacts to Special Status Plants

Potential Impacts. Seventeen special status vascular plant species are known to occur in the vicinity of the planning area: Hoover's spurge (*Chamaesyce hooveri*), San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), vernal pool smallscale (*Atriplex persistens*), recurved larkspur (*Delphinium recurvatum*), King's River buckwheat (*Eriogonum nudum var. regirivum*), spiny sepaled button-celery (*Eryngium spinosepalum*), American manna grass (*Glyceria grandis*), Winter's sunflower (*Helianthus winteri*), California satintail (*Imperata brevifolia*), alkali-sink goldfields (*Lasthenia chrysantha*), Coulter's goldfields (*Lasthenia glabrata ssp. Coulteri*), California alkali grass (*Puccinellia simplex*), and Sanford's arrowhead (see Table 1). Because of many decades of

disturbance, habitat for all but the Sanford's arrowhead is absent from the planning area. Potential project impacts to the Sanford's arrowhead have been considered previously (see Section 3.3.1) and are not readdressed in this section. Future development of the planning area would not affect individuals or populations of the remaining 16 special status plant species, and impacts are considered less than significant under CEQA.

Mitigation. Mitigation measures are not warranted.

3.4.2 Project-Related Impacts to Special Status Animals Absent or Unlikely to Occur in the Planning Area

Potential Impacts. Of the 19 special status animal species potentially occurring in the region, ten species would be absent or unlikely to occur on or within the planning area (see Table 1). These include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), foothill yellow-legged frog (*Rana boylii*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea hammondii*), willow flycatcher (*Empidonax traillii*), San Joaquin kit fox (*Vulpes macrotis mutica*), golden eagle (*Aquila chrysaetos*), and American badger (*Taxidea taxus*). These species are not at risk of injury or mortality from future development activities within the planning area because of the extreme unlikelihood of their occurring within the planning area. Similarly, future development of the planning area will not result in loss of habitat for these species, because there is little or no likelihood that they utilize habitats of the planning area.

Mitigation. No mitigation is warranted.

3.4.3 Construction-Related Mortality of Special Status Animal Species that May Occur on the Project Site as Occasional or Regular Foragers but Breed Elsewhere

Potential Impacts. Three special status animals, the western pond turtle, northern harrier (*Circus cyaneus*) and western mastiff bat (*Eumops perotis californicus*), have the potential to pass through or forage on the site from time to time, but would not breed on site or close enough to the site that they would be vulnerable to project-related disturbance at their nest or roost sites

(see Table 1). Potential project-related mortality of the western pond turtle in its aquatic habitat was considered and fully mitigated in Section 3.3.1. Foraging harriers and western mastiff bats would not be vulnerable to construction-related injury or mortality because they are highly mobile and would be expected to simply avoid active work areas.

Mitigation. Mitigation is not warranted.

3.4.4 Loss of Habitat for Special Status Animals that May Occur in the Planning Area

Potential Impacts. Of the 19 special status animal species potentially occurring in the region, nine species have the potential to occur within the planning area. These species include the Swainson's hawk, white-tailed kite, burrowing owl, loggerhead shrike, tricolored blackbird, and pallid bat, all of which may utilize the planning area for breeding and foraging, and the western pond turtle, northern harrier, and western mastiff bat, which are expected to utilize the planning area for foraging only. Loss of habitat for the Swainson's hawk and burrowing owl have been considered previously (see Section 3.3.3 and 3.3.4) and is not readdressed in this section.

All habitats within the planning area in which the white-tailed kite, loggerhead shrike, tricolored blackbird, and pallid bat could theoretically breed are of relatively low quality for the species in question and comparable to breeding habitat offered elsewhere in the region. White-tailed kites do not usually nest adjacent to roads (Erichsen 1995), suggesting that many of the trees in the planning area would be a low-value nesting option for this species. Loggerhead shrikes in the San Joaquin Valley generally nest in riparian areas, desert scrub, or agricultural hedgerows; these habitats are marginal to absent within the planning area. Tricolored blackbirds have become increasingly dependent on wheat and triticale fields for nesting, but these habitats are suboptimal because the crops are generally harvested during the breeding season; moreover, similar grain fields are relatively abundant in the region. Finally, the pallid bat prefers to roost in rock crevices and cliff faces, which are absent from the planning area. Although the trees and buildings of the planning area could theoretically also be used, these features are less than ideal as breeding sites for the pallid bat due to high levels of surrounding human disturbance. Regional populations of white-tailed kite, loggerhead shrike, tricolored blackbird, and pallid bat are unlikely to be adversely affected by project-related loss of breeding habitat because the

planning area offers only marginal breeding habitat for these species, and considerable breeding habitat of similar or higher quality exists for these species elsewhere in the region.

The planning area's potential foraging habitat for the species considered in this section is comparable to foraging habitat offered on surrounding lands, and is unlikely to be of regional importance. The white-tailed kite, northern harrier, loggerhead shrike, tricolored blackbird, and pallid bat all have the potential to forage in the agricultural fields and grasslands/pastures of the rural zone, and the pallid bat may also forage in the rural zone's orchard/vineyard habitats. Western pond turtles may occur and forage in the planning area's canals, ditches, and basins. Although future development of the planning area may modify or eliminate these land uses, all are relatively abundant in the region. Western mastiff bats would likely be able to continue foraging in flight over the planning area even after the planning area is built out.

For these reasons, loss of habitat for the seven species considered in this section is not considered to be a significant impact under CEQA.

Mitigation. No mitigation is warranted.

3.4.5 Project-Related Impacts to Jurisdictional Waters

Potential Impacts. As discussed in Sections 2.3.8, the hydrologic features in the planning area include an approximately 2.9-mile reach of Sand Creek, an approximate 1.4-mile reach of Tout Ditch, an approximately 0.37-mile reach of Bump and Edmiston Ditch, and an approximately 0.25-mile reach of Bowhay Ditch. Under the Navigable Waters Protection Rule, it appears none of these features meet the definition of Waters of the U.S.; however, Sand Creek is likely to fall under the jurisdiction of CDFW, and any of the planning area's waterways or artificial ponds/basins may be regulated by the RWQCB.

Future project-related impacts to the planning area's waterways and artificial ponds/basins, should they occur, would not be considered significant under CEQA. The three irrigation ditches and all of the ponds/basins were human-constructed, do not replace natural drainages or wetlands, are highly maintained for ongoing anthropogenic use, and do not appear to offer unique value to locally-occurring flora and fauna. Although the engineered channel of Sand

Creek does replace a natural drainage, it is highly maintained and supports minimal riparian vegetation, limited to a few stands in the southwestern portion of the planning area. As such, modification or fill of these features would not substantially adversely affect the environment. However, project applicants would need to work with the RWQCB to determine whether Waste Discharge Requirements or other permits/authorizations were required, and in the case of Sand Creek, would need to submit a Notification of Lake or Streambed Alteration to CDFW.

Removal of riparian trees along Sand Creek, if it occurs, would constitute a significant impact under CEQA and was addressed and mitigated in Section 3.3.7 above.

Mitigation. Mitigation is not warranted.

3.4.6 Project-Related Impacts to Wildlife Movement Corridors

Potential Impacts. As discussed, Sand Creek is a wide, somewhat naturalized corridor that traverses the highly disturbed matrix of the planning area, offering a relatively secure conduit for wildlife movement. Any future projects that are implemented along Sand Creek would have the potential to temporarily disrupt or redirect the movements of wildlife that could otherwise use this corridor; however, it is anticipated that after project completion, normal movements would resume. Birds using the Pacific flyway will continue to do so during and following future project development. Future development of the planning area will result in a less than significant effect on wildlife movement corridors.

Mitigation. No mitigation is warranted.

3.4.7 Project Impacts to Sensitive Natural Communities and Designated Critical Habitat

Potential Impacts. As discussed, sensitive natural communities and designated critical habitat are absent from the planning area. All of the planning area's vegetation associations are highly modified, and most are dominated by non-native species. The nearest units of critical habitat are located 1.8 miles southeast, 2.8 miles southwest, and 5.18 miles southwest of the planning area. Future development of the planning area does not have the potential to impact sensitive natural communities or units of critical habitat.

Mitigation. No mitigation is warranted.

3.4.8 Local Policies or Habitat Conservation Plans

Potential Impacts. Individual projects will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs or NCCPs are in effect for the area. Therefore, the projects are not expected to conflict with local policies or habitat conservation plans.

Mitigation. No mitigation is warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PLANNING AREA

APPENDIX A: VASCULAR PLANTS OF THE PLANNING AREA

The vascular plant species listed below were observed within the planning area during the site surveys conducted by Live Oak Associates, Inc. on April 15 and April 16, 2021. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
NR - No review
NA - No agreement
NI - No investigation

ANACARDACEAE – Sumac Family		
Schinus molle	Peruvian Pepper Tree	UPL
APOCYNACEAE – Dogbane Family		
Nerium oleander	Oleander	UPL
ARACEAE – Arum Family		
Lemna minor	Common Duckweed	
ARECACEAE – Palm Family		
Brahea armata	Mexican blue palm	
Livistona decipiens	Ribbon Fan Palm	
Washingtonia robusta	Mexican Fan Palm	
ASTERACEAE – Sunflower Family		
Artemisia douglasiana	California Mugwort	
Erigeron canadensis	Canada Horseweed	FACU
Lactuca serriola	Prickly Lettuce	
Xanthium strumarium	Rough Cocklebur	
BETULACEAE – Birch Family		
Populus fremontii	Fremont's Cottonwood	FAC
BIGNONIACEAE – Jacaranda Family		
Jacaranda mimosifolia	Jacaranda	
BORAGINACEAE – Borage Family		
Amsinckia menziesii	Common Fiddleneck	
BRASSICACEAE – Mustard Family		
Brassica nigra	Black Mustard	
CHENOPODIACEAE – Goosefoot Family		
Salsola tragus	Russian Thistle	FACU
CUPRESSACEAE – Cypress Family		
Calocedrus decurrens	California incense-cedar	
Cupressus sempervirens	Italian Cypress	UPL
Sequoia sempervirens	Coast Redwood	UPL
CYPERACEAE – Umbrella Sedge Family		
Cyperus eragrostis	Tall Flatsedge	FACW

FABACEAE – Legume Family		
Albizia julibrissin	Pink Silk Tree	UPL
Medicago sativa	Alfalfa	UPL
FAGACEAE – Beech Family		
Quercus lobata	Valley Oak	
GERANEACEAE – Geranium Family		
Erodium cicutarium	Red-stemmed Filaree	UPL
JUGLANDACEAE – Walnut Family		
Juglans californica.	California Walnut	UPL
LYTHRACEAE – Loostrife Family		
Lagerstroemia indica	Crape Myrtle	UPL
MALVACEAE – Mallow Family		
Malva parviflora	Cheeseweed	UPL
MAGNOLIACEAE – Magnolia Family		
Magnolia sp.	Magnolia Tree	UPL
MORACEAE – Mulberry Family		
Morus alba	White Mulberry	UPL
OLEACEAE – Olive Family		
Olea europaea	European olive	UPL
PAPAVERACEAE – Poppy Family		
Eschscholzia californica	California Poppy	
PINACEAE – Pine Family		
Cedrus deodara	Deodar Cedar	UPL
Pinus sp.	Cultivated Pine	UPL
Pinus radiata	Monterey Pine	UPL
POACEAE – Grass Family		
Avena fatua	Wild Oats	UPL
Bromus diandrus	Ripgut Brome	UPL
Cynodon dactylon	Bermuda Grass	FAC
Hordeum murinum	Wall Barley	FACU
Lolium multiflorum	Common Wild Rye	FAC
Sorghum halepense	Johnson Grass	FACU
Triticum sp.	Cultivated Wheat	UPL
POLYGONACEAE – Buckwheat Family		
Rumex crispus	Curly Dock	
ROSACEAE – Rose Family		
Prunus sp.	Stone Fruit	UPL
Rosa sp.	Cultivated Rose	UPL
RUTACEAE – Orange Family		
Citrus sinensis	Orange Tree	UPL
SALICACEAE – Willow Family		
Salix exigua	Sandbar Willow	
SOLANACEAE – Nightshade Family		
Solanum elaeagnifolium	Silverleaf Nightshade	UPL
TYPHACEAE – Cattail Family		
Typha sp.	Cattail	

ULMACEAE – Elm Family

Ulmus parvifolia Chinese Elm

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR IN THE PLANNING AREA

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR IN THE PLANNING AREA

The species listed below are those that may reasonably be expected to use the habitats of the planning area routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the planning area on April 15 or 16, 2021 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)
ORDER: SALIENTIA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and relatives)
Sierran Treefrog (*Pseudacris sierra*)
FAMILY: RANIDAE (True Frogs)
*****Bullfrog (*Lithobates catesbeiana*)

CLASS: REPTILIA (Reptiles)
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Western Fence Lizard (*Sceloporus occidentalis*)
Side-blotched Lizard (*Uta stansburiana*)
FAMILY: TEIIDAE (Whiptails and relatives)
Western Whiptail (*Cnemidophorus tigris*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Glossy Snake (*Arizona elegans*)
Gopher Snake (*Pituophis melanoleucus*)
Common Kingsnake (*Lampropeltis getulus*)
Long-nosed Snake (*Rhinocheilus lecontei*)
Common Garter Snake (*Thamnophis sirtalis*)
Aquatic Garter Snake (*Thamnophis atratus*)
FAMILY: VIPERIDAE (Vipers)
Northern Pacific Rattlesnake (*Crotalus oreganus oreganus*)

CLASS: AVES (Birds)
ORDER: ANSERIFORMES (Ducks, Geese, and Swans)
FAMILY: ANATIDAE (Ducks, Geese, and Swans)
*****Canada goose (*Branta canadensis*),
*****Mallard (*Anas platyrhynchos*)
ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)
FAMILY: ARDEIDAE (Herons and Bitterns)
Great Blue Heron (*Ardea herodias*)
Cattle Egret (*Bubulcus ibis*)

Great Egret (*Ardea alba*)
Snowy Egret (*Egretta thula*)
FAMILY: THRESKIORNITHIDAE (Ibises and Spoonbills)
White-faced Ibis (*Plegadis chihi*)
FAMILY: CATHARTIDAE (American Vultures)
Turkey Vulture (*Cathartes aura*)
ORDER: FALCONIFORMES (Hawks and Falcons)
FAMILY: ACCIPITRIDAE (Kites, Eagles, and Hawks)
White-tailed Kite (*Elanus leucurus*)
Northern Harrier (*Circus cyaneus*)
*Red-tailed Hawk (*Buteo jamaicensis*)
Ferruginous Hawk (*Buteo regalis*)
Sharp-Shinned Hawk (*Accipiter striatus*)
*Cooper's Hawk (*Accipiter cooperii*)
Swainson's Hawk (*Buteo swainsoni*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
American Kestrel (*Falco sparverius*)
ORDER: GRUIFORMES (Cranes, Rails and Relatives
FAMILY: RALLIDAE (Rails, Gallinules, and Coots)
American Coot (*Fulica Americana*)
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE (Plovers and relatives)
*****Killdeer (*Charadrius vociferus*)
FAMILY: RECURVIROSTRIDAE (Stilts and Avocets)
Black-necked Stilt (*Himantopus mexicanus*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Rock Pigeon (*Columba livia*)
*Mourning Dove (*Zenaida macroura*)
*Eurasian Collared-Dove (*Streptopelia decaocto*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
Burrowing Owl (*Athene cunicularia*)
Great Horned Owl (*Bubo virginianus*)
Western Screech Owl (*Otus kennicottii*)
ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
Black-chinned Hummingbird (*Archilochus alexandri*)
Anna's Hummingbird (*Calypte anna*)
Rufous Hummingbird (*Selasphorus rufus*)
ORDER: PICIFORMES (Woodpeckers and relatives)
FAMILY: PICIDAE (Woodpecker and Wrynecks)
*Northern Flicker (*Colaptes chrysoides*)
ORDER: PASSERIFORMES (Perching Birds)

FAMILY: TYRANNIDAE (Tyrant Flycatchers)
Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
*Western Kingbird (*Tyrannus verticalis*)
FAMILY: LANIIDAE (Shrikes)
Loggerhead Shrike (*Lanius ludovicianus*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
*Western Scrub Jay (*Aphelocoma coerulescens*)
*American Crow (*Corvus brachyrhynchos*)
Common Raven (*Corvus corax*)
FAMILY: ALAUDIDAE (Larks)
Horned Lark (*Eremophila alpestris*)
FAMILY: HIRUNDINIDAE (Swallows)
*Cliff Swallow (*Hirundo pyrrhonota*)
Barn Swallow (*Hirundo rustica*)
FAMILY: TURDIDAE
*American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
*Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
*European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
American Pipit (*Anthus rubescens*)
FAMILY: BOMBYCILLIDAE (Waxwings)
Cedar Waxwing (*Bombycilla cedrorum*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Sparrows and Relatives)
*Savannah Sparrow (*Passerculus sandwichensis*)
*White-crowned Sparrow (*Zonotrichia leucophrys*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
Western Meadowlark (*Sturnella neglecta*)
Red-winged Blackbird (*Agelaius phoeniceus*)
Tricolored Black Bird (*Agelaius tricolor*)
*Great-tailed Grackle (*Quiscalus mexicanus*),
*Brewer's Blackbird (*Euphagus cyanocephalus*)
Brown-headed Cowbird (*Molothrus ater*)
Bullock's Oriole (*Icterus bullockii*)
Hooded Oriole (*Icterus cucullatus*)
FAMILY: FRINGILLIDAE (Finches)
*House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Carduelis psaltria*)
Lawrence's Goldfinch (*Spinus lawrencei*)
FAMILY: PASSERIDAE (Old World Sparrows)
*House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)

ORDER: DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: CHIROPTERA (Bats)

FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)

Southern Long-nosed Bat (*Leptonycteris curasoae*)

FAMILY: VESPERTILIONIDAE (Evening Bats)

Yuma Myotis (*Myotis yumanensis*)
California Myotis (*Myotis californicus*)
Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)

Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORIDAE (Rabbits and Hares)

Audubon's Cottontail (*Sylvilagus audubonii*)
Black-tailed (Hare) Jackrabbit (*Lepus californicus*)

ORDER: RODENTIA (Rodents)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)

*California Ground Squirrel (*Spermophilus beecheyi*)

FAMILY: GEOMYIDAE (Pocket Gophers)

Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)

Western Harvest Mouse (*Reithrodontomys megalotis*)
Deer Mouse (*Peromyscus maniculatus*)
Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)
California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and relatives)

Coyote (*Canis latrans*)
Red Fox (*Vulpes vulpes*)

FAMILY: PROCYONIDAE (Raccoons and relatives)

Raccoon (*Procyon lotor*)

FAMILY: MEPHITIDAE (Skunks)

Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)

Bobcat (*Lynx rufus*)
Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PLANNING AREA

Photo 1 (above). Urban land use of the planning area; pictured is a residential street in Orosi.
Photo 2 (below). A citrus distribution warehouse in Cutler.

Photo 3 (above). Orchard habitat of the planning area; pictured is a citrus orchard along Road 124. **Photo 4 (below)**. Vineyard habitat of the planning area; pictured is a vineyard along Avenue 400.

Photo 5 (above). Agricultural field habitat of the planning area; pictured is a post-harvest crop field along Avenue 408. **Photo 6 (below).** Agricultural field habitat of the planning area; pictured is a fallow alfalfa field along Avenue 422.

Photo 7 (above). Non-native grassland habitat of the planning area; pictured is a field along Railroad Drive. **Photo 8 (below).** Pasture habitat of the planning area; pictured is a large field with livestock along Road 130.

Photo 9 (above). Rural developed habitat along Road 127. **Photo 10 (below).** Ruderal habitat of the planning area; pictured is a barren area along Railroad Drive near Topeka Road.

Photo 11 (above) Artificial pond/basin habitat of the planning area; pictured is a basin along Whittaker Ave near Road 124. **Photo 12 (below).** Artificial pond/basin habitat of the planning area; pictured is a basin along Road 124 near Buena Vista Ave.

Photo 13 (above). Waterway habitat of the planning area; pictured is a northern reach of Sand Creek near Road 130 in Orosi. **Photo 14 (below).** Sand Creek along Road 124 in Cutler, showing localized riparian vegetation.

Photo 15 (above). Tout Ditch along Road 120 in Orosi.

Appendix “C”

Cultural and Tribal Cultural Resources

California Historical Resources Information Search

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Hector Guerra
Tulare County Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Record Search 18-417
Resource Management Agency
OCT 30 2018

Date: October 23, 2018

Re: General Plan Amendment No. GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010 – Cutler-Orosi Community Plan Update

County: Tulare

Map(s): Orange Cove South 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS

According to the information in our files, there have been 17 previous cultural resource studies conducted within portions of the project area, TU-00094, 00095, 00123, 00506, 00507, 00524, 00569, 00871, 00906, 00992, 01017, 01145, 01186, 01214, 01323, 01498, and 01640. There has been no additional studies conducted within the one-half mile radius.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS

There are two recorded cultural resource within project area, P-54-003228 and P-54-004004. There is one recorded resource within the one-half mile radius, P-54-004624. These resources consist of two historic era buildings and one historic era canal.

Resource P-54-004004 is the Orosi Branch Library, located at 12662 Avenue 416. This resource has been given a National Register status code of 1S, indicating the individual property has been listed in the National Register of Historic Places by the Keeper. It is also listed in the California Register of Historical Resources. There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of a General Plan Update for the Cutler-Orosi Community. Further, we understand no immediate ground disturbance will take place as a result of this update. Therefore, no further cultural resource investigation is recommended at this time. However, prior to any future ground disturbance project activities, we recommend a new record search be conducted so our office can then make project specific recommendations for further cultural resources study, if needed. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Celeste M. Thomson, Coordinator **Date:** October 23, 2018

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Sacred Lands File Search

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

October 18, 2018

Jessica Willis
Tulare County Resource Management Agency

Sent Via Email: jwillis@co.tulare.ca.us

RE: Cutler-Orosi Community Plan Update, Orange Cove South, Tulare County

Dear Ms. Willis:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced project.

Government Code §65352.3 requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the NAHC for the purpose mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC requests that lead agencies include in their notifications information regarding any cultural resources assessment that has been completed on a potential "area of project affect" (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.

- Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. **A search of the SFL was completed for the USGS quadrangle information provided with negative results.**

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. **A tribe may be the only source of information regarding the existence of a tribal cultural resource.**

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

Lead agencies or agencies potentially undertaking a project are encouraged to send more than one written notice to tribes that are traditionally and culturally affiliated to a potential APE during the 30-day notification period to ensure that the information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information. If you have any questions, please contact me at my email address: Sharaya.Souza@nahc.ca.gov.

Sincerely,

Sharaya Souza
Staff Services Analyst
(916) 573-0168

Native American Heritage Commission
Native American Contacts List
10/16/2018

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella ,CA 93240
(661) 340-0032 Cell

Kawaiisu
Tubatulabal

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella ,CA 93283
brobinson@iwvisp.com
(760) 378-2915 Cell

Tubatulabal
Kawaiisu

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P.O. Box 8
Lemoore ,CA 93245
(559) 924-1278
(559) 924-3583 Fax

Tache
Tachi
Yokut

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Tribal Chairperson
P.O. Box 226
Lake Isabella ,CA 93240
(760) 379-4590
(760) 379-4592 Fax

Tubatulabal

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville ,CA 93258
neil.peyron@tulerivertribe-nsn.gov
(559) 781-4271
(559) 781-4610 Fax

Yokuts

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas ,CA 93906
kwood8934@aol.com
(831) 443-9702

Foothill Yokuts
Mono
Wuksache

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed:
Cutler-Orosi Community Plan Update, Orange Cove South, Tulare County.

Native American Consultation Tracking Table

Consultation Notice – Cutler-Orosi Project																
TRIBE CONTACTED	REQUEST TYPE		DOCUMENTS SENT					MAILED				CONSULTATION PERIOD		CONSULTATION / ACTIONS		
	AB 52	SB 18	Map	Project Description	SLF Search	CHRIS	Other	Date	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Date	TYPE	Summary
SACRED LAND FILE (SLF) REQUEST																
Native American Heritage Commission	X	x	X	X	X	x			X			10/18/18	---	4/12/21	Letter	Response to SLF Search request
CONSULTATION REQUEST LETTERS (CONCURRENT WITH NOP)																
Kern Valley Indian Council Robert Robinson, Co-Chairperson PO Box 1010 Lake Isabella, CA 93240	X	x					Notification Letter	10/26/18			70131710 00001956 7242	10/29/18	1/27/19	3/5/19	Phone	R. Kashiwa called and left a message on 3/5/19 at 13:24 for follow-up of October 2018 request As of 4/5/19, RMA has not received a response.
Kern Valley Indian Council Julie Turner, Secretary P. Box 1010 Lake Isabella, CA 93240	X	x					Notification Letter	10/26/18			70131710 00001956 7259	10/29/18	1/27/19			
Santa Rosa Rancheria Rueben Barrios Sr., Chairperson P. O. Box 8 Lemoore, CA 93245	X	x					Notification Letter	10/26/18			70131710 00001956 7266	10/31/18	1/29/19	3/5/19	Phone	R. Kashiwa called and left a message on 3/5/19 at 13:53 for follow-up of October 2018 request As of 4/5/19, RMA has not received a response.
Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Greg Cuara, Cultural Specialist P. O. Box 8 Lemoore, CA 93245	X	x					Notification Letter	10/26/18			70131710 00001956 7280	10/29/18	1/27/19			
Santa Rosa Rancheria Shana Powers, Director P. O. Box 8 Lemoore, CA 93245	X	x					Notification Letter	10/26/18			70131710 00001956 7273	10/29/18	1/27/19			
Torres Martinez Desert Cahuilla Indians Michael Mirelez, Cultural Resource Coordinator P. O. Box 1160 Thermal, CA 92274	X	x					Notification Letter	10/26/18			70131710 00001956 7198	10/30/18	1/28/19	3/5/19 6/3/19	Phone Letter	R. Kashiwa sent follow up e-mail to mmirelez@tmdci.org The Tribe defers all future notifications to local tribes.

Consultation Notice – Cutler-Orosi Project																
TRIBE CONTACTED	REQUEST TYPE		DOCUMENTS SENT					MAILED				CONSULTATION PERIOD		CONSULTATION / ACTIONS		
	AB 52	SB 18	Map	Project Description	SLF Search	CHRIS	Other	Date	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Date	TYPE	Summary
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P. O. Box 226 Lake Isabella, CA 93240	X	x					Notification Letter	10/26/18			70131710 00001957 0013	11/9/18	2/7/19	3/5/19	E-mail	R. Kashiwa sent follow up e-mail to rgomez@tubatulabal.org As of 4/5/19, RMA has not received a response.
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258	X	x					Notification Letter	10/26/18			70131710 00001956 7204	10/30/18	1/28/19	3/5/19	Phone	R. Kashiwa called for follow up and repeatedly got a busy signal.
Tule River Indian Tribe Tribal Archaeological Department Felix Chrisman, Tribal Archaeologist P. O. Box 589 Porterville, CA 93258	X	x					Notification Letter	10/26/18			70131710 00001956 7297	10/30/18	1/28/19			
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258	X	x					Notification Letter	10/26/18			70131710 00001956 7501	11/5/18	2/3/19			
Wuksache Indian Tribe/Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906	X	x					Notification Letter	10/26/18			70131710 00001956 7303	10/29/18	1/27/19	3/5/19	Phone	R. Kashiwa called and left a message on 3/5/19 at 13:53 for follow-up of October 2018 request. As of 4/5/19, RMA has not received a response.

Native American Consultation Letters and Project Notification

RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
PO Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Co-Chairperson Robinson,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing a Draft Environmental Impact Report (DEIR) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on October 9, 2018, for the Cutler-Orosi Community Plan Update Project. The SLF search returned on October 18, 2018, with negative results; however, the NAHC recommended consultation with your Tribe. Results of the SLF search will be made available upon the release of the DEIR for public review. However, results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on October 9, 2018. Results of the CHRIS search have not yet been received by the County. As such, the CHRIS search results will be made available upon the release of the DEIR for public review. However, the results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search may be made available to your Tribal Representatives if a written request for consultation is received. Should the County not receive a response to this request within thirty (30) days of receipt of this letter, it will be presumed that there are no cultural resources of concern and a Cultural Resources Study will not be required.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52 and SB 18.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Hector Guerra, Chief of Environmental Planning, by phone at (559) 624-7121, or by email at hguerra@co.tulare.ca.us.

Sincerely,

Jessica R. Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachment: Tribal Consultation Notice

RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Kern Valley Indian Council
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Ms. Turner,

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- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

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Sincerely,

Jessica R. Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachment: Tribal Consultation Notice

RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Santa Rosa Rancheria
Rueben Barrios Sr., Chairperson
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Chairperson Barrios,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,

Jessica R Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachment: Tribal Consultation Notice

RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Santa Rosa Rancheria Tachi Yokut Tribe
Cultural Department
Greg Cuara, Cultural Specialist
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Mr. Cuara,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,

Jessica R. Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Santa Rosa Rancheria
Shana Powers, Director
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Ms. Powers,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,

Jessica R Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Torres Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P. O. Box 1160
Thermal, CA 92274

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Mr. Mirelez,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,

Jessica Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Chairperson
P. O. Box 226
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Chairperson Gomez,

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Sincerely,

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Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

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VISALIA, CA 93277
PHONE (559) 624-7000
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Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Tule River Indian Tribe
Neil Peyron, Chairperson
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Chairperson Peyron,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Jessica R. Willis

Jessica Willis
Planner IV
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JWillis@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
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Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Tule River Indian Tribe
Tribal Archaeological Department
Felix Chrisman, Tribal Archaeologist
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Mr. Chrisman,

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Jessica R. Willis

Jessica Willis
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Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Tule River Indian Tribe
Environmental Department
Kerri Vera, Director
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Ms. Vera,

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Jessica R Willis

Jessica Willis
Planner IV
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VISALIA, CA 93277
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Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

October 24, 2018

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA 93906

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Cutler-Orosi Community Plan Update Project (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010)

Dear Chairperson Woodrow,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing a Draft Environmental Impact Report (DEIR) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on October 9, 2018, for the Cutler-Orosi Community Plan Update Project. The SLF search returned on October 18, 2018, with negative results; however, the NAHC recommended consultation with your Tribe. Results of the SLF search will be made available upon the release of the DEIR for public review. However, results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on October 9, 2018. Results of the CHRIS search have not yet been received by the County. As such, the CHRIS search results will be made available upon the release of the DEIR for public review. However, the results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search may be made available to your Tribal Representatives if a written request for consultation is received. Should the County not receive a response to this request within thirty (30) days of receipt of this letter, it will be presumed that there are no cultural resources of concern and a Cultural Resources Study will not be required.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52 and SB 18.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Hector Guerra, Chief of Environmental Planning, by phone at (559) 624-7121, or by email at hguerra@co.tulare.ca.us.

Sincerely,

Jessica R. Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachment: Tribal Consultation Notice

AB 52 and SB 18 PROJECT NOTIFICATION AND TRIBAL CONSULTATION REQUEST

Project Title: Cutler-Orosi Community Plan Update.

Project Location: East of Road 120, South of Avenue 424.

USGS 7.5 Minute Quadrangle: Orange Cove South.

PLSS: Sections 07, 08, 17, 18, 19, 20, Township 16 South, Range 25 East, MDB&M.

Project Description: On September 30, 2014, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Cutler/Orosi Community Plan. The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Cutler/Orosi Community Plan Update components are described later in this section will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the following General Plan goals:

    a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
    b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
    c) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
    d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
    e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be improved for the following reasons:

    a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
    b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and

c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

Request for Consultation: Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Cutler-Orosi Community Plan Update Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places and tribal cultural resources.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this notification. Written correspondence can be mailed to the following addresses:

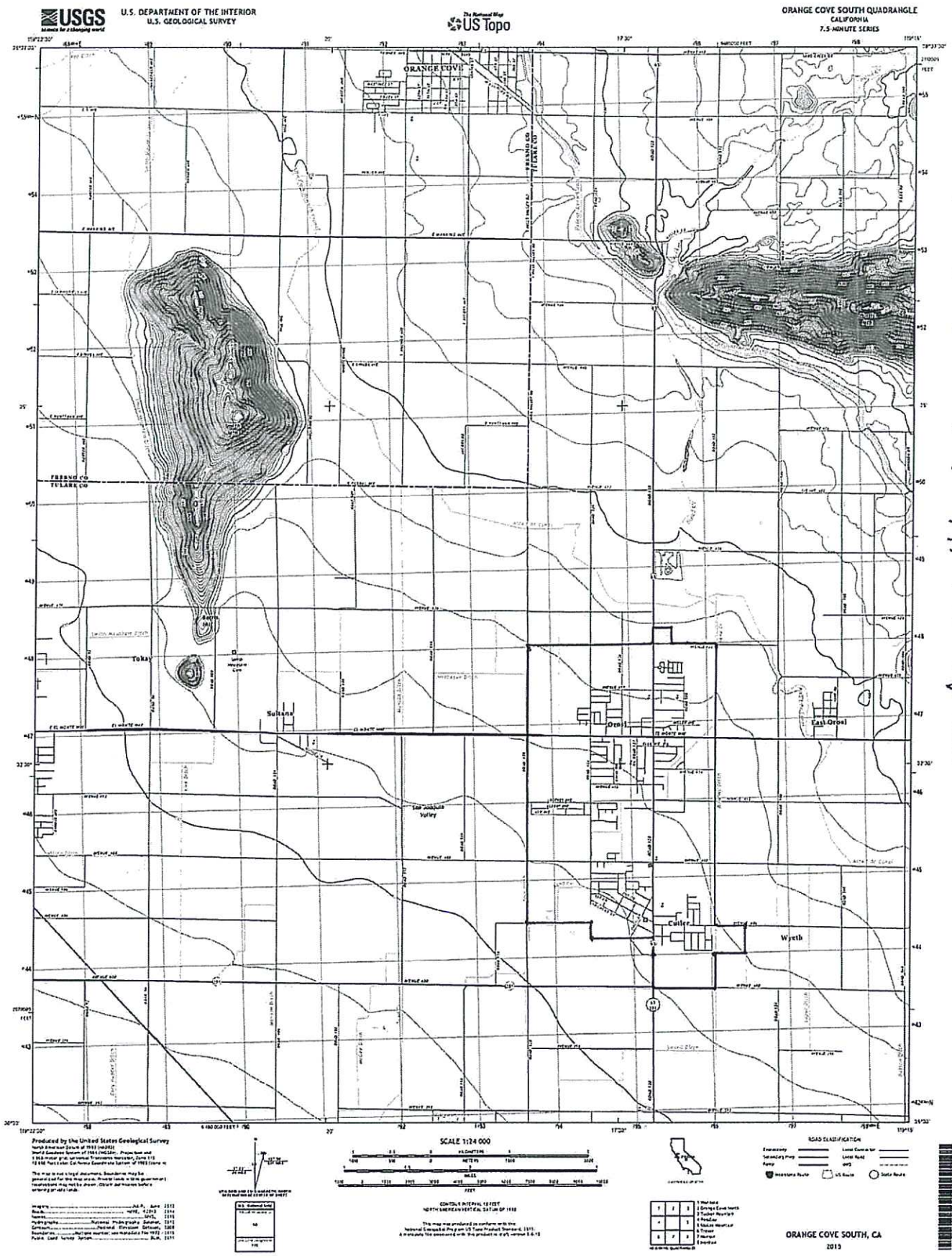
US Post: Tulare County Resource Management Agency
Environmental Planning Division
Attn: Jessica Willis / Hector Guerra
5961 S. Mooney Blvd.
Visalia, CA 93277-9394

E-mail: JWillis@co.tulare.ca.us and HGuerra@co.tulare.ca.us

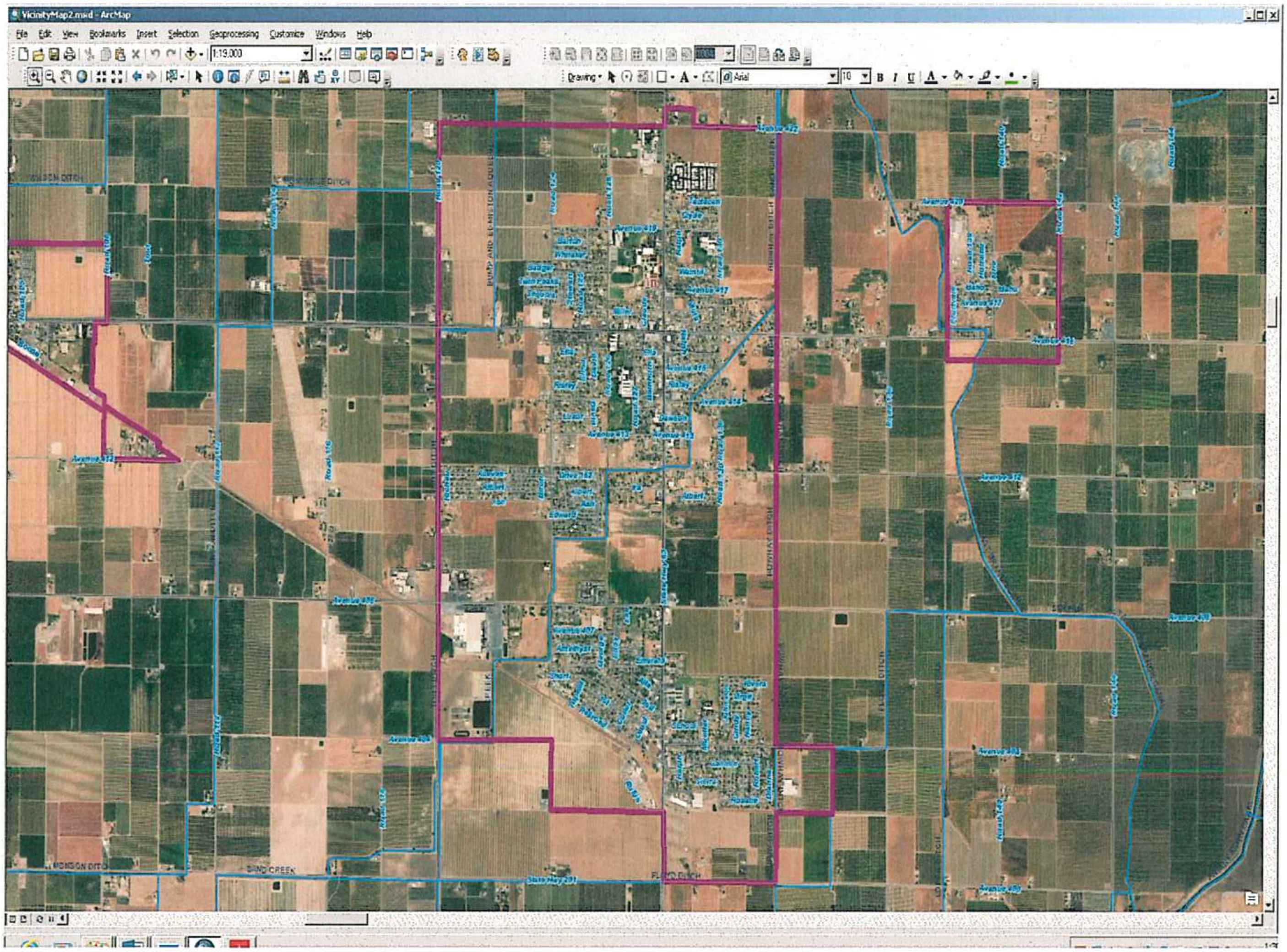
If you need further assistance or have any questions, please feel free to contact Jessica Willis by phone at (559) 624-7122, or Hector Guerra at (559) 624-7121.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52 and SB 18.

Cutler - Orosi Community Plan Update



— Approximate Urban Development Boundary UDB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Appendix “D”

Water Supply Study

DRAFT

WATER SUPPLY STUDY
CUTLER - OROSI AREA

FEBRUARY, 2007

Dennis R. Keller / James H. Wegley
Consulting Civil Engineers

TABLE OF CONTENTS

SECTION 5 - TREATMENT PROCESS COMPARISONS

LIST OF TABLES

LIST OF FIGURES

SECTION 1
INTRODUCTION
WATER SUPPLY STUDY
CUTLER - OROSI AREA

BACKGROUND

The Orosi Public Utility District (OPUD) and the Cutler Public Utility District (CPUD) provide domestic water to the residents of the unincorporated communities of Orosi and Cutler, respectively. Each district relies solely on groundwater to meet the water demands of its customers. OPUD presently utilizes four wells. CPUD has two active wells.

In Orosi, the water quality and quantity of the existing groundwater supply delivered to the water users is good. Nitrate levels at inactive well sites, however exceed the regulatory standard of 45 mg/l. The community of Cutler is experiencing a similar situation, although CPUD's existing wells are currently experiencing elevated nitrate levels which are jeopardizing the long term viability of the existing water supply.

PURPOSE

Currently, each district has sufficient water supply to meet existing water demands. Additional water supplies, however, are necessary to meet future water needs or to insure sufficient water supplies in the event any existing wells experience elevated contamination over time that require either district to remove well(s) from active status. Two very different options that represent potential solutions for addressing the districts' future water demands are: treatment of the groundwater or the use and treatment of surface waters. The purpose of this Report is to evaluate each water supply option and establish the most feasible approach.

SECTION 2
DISTRICT WATER SUPPLY FACILITIES
WATER SUPPLY STUDY
CUTLER - OROSI AREA

GENERAL

The Cutler Public Utility District (CPUD) and the Orosi Public Utility District (OPUD) are located in Tulare County, approximately 15 miles north of the City of Visalia. The locations of the districts are shown on Figure 2-1. The residents of Cutler and Orosi are served by County maintained roads and State Route 63 which runs north and south through the middle portions of the districts.

Since the districts do not have access to a surface water supply, the domestic water supplies are developed through the pumping of groundwater. Each district's water supply system consists of groundwater wells, storage tanks, hydropneumatic tanks and appurtenances. The water supply facilities for each district are described in this section of the report.

CUTLER PUBLIC UTILITY DISTRICT

CPUD has a good groundwater supply in terms of most water quality constituents. CPUD is able to meet bacteriological standards without providing chlorination of the individual wells. There are concerns, however, regarding potential DBCP and/or nitrate contamination of the aquifer serving the community. CPUD has lost two existing wells because of high concentrations of nitrates and one well is not connected to the system because of high concentrations of DBCP. Water testing for all existing and new wells have shown elevated nitrate concentrations that are continuing to increase over time.

Wells

CPUD has a total of four developed wells. The data for the wells is summarized in Table 2-1. Two of the wells are active and two of the wells are inactive at this time. The two inactive wells were taken out of service because water test results exceeded the Maximum Contaminant Level (MCL) limit for nitrates. Well Nos. 5 and 6 are the two active wells that supply water for the community.

Additional Wells

There is a well within CPUD (Well No. 7) that is not owned by CPUD. The well is owned by the Tulare County Redevelopment Agency and is used for fire flow at a local industry. This well has water that shows concentrations of DBCP which exceeds its MCL. CPUD has considered taking ownership if the owner supplies treatment for DBCP. CPUD also has two proposed wells in various stages of development. Well No. 8 was completed in April, 2006. Water quality testing, however, has revealed high nitrate concentrations approaching the MCL. Future use of Well No. 8 is uncertain. Well No. 9 was drilled on the site for a proposed blending tank facility for CPUD. The well facility, when completed, will allow for water from Well Nos. 3 and 4 to be used in combination with flows from Well No. 5 and Well No. 9. The availability of sufficient quantities of low nitrate concentration water from CPUD's wells is uncertain.

TABLE 2-1
CPUD GROUNDWATER WELLS
WATER SUPPLY STUDY
CUTLER - OROSI AREA

WELL NO.	DATE DRILLED	DEPTH (Feet)	FLOW RATE (g.p.m.)	STATUS
3	1951	298	797	Inactive
4	1961	368	334	Inactive
5	1962	500	1,000	Active
6	1979	540	497	Active
7	1991	400	700	Not connected to system.
8	2006	330	300	Not complete.
9	Test hole only.	--	--	Not complete.
TOTAL ACTIVE WELL CAPACITY			1,497 (2.2 MGD)	

CPUD utilizes one elevated water tank for water system storage and pressure. The tank holds 50,000 gallons. The tank is connected to the distribution system by a common fill inlet and outlet configuration. CPUD's water supply and distribution system is shown on Figure 2-2.

OROSI PUBLIC UTILITY DISTRICT

OPUD also has a good groundwater supply in terms of most water quality parameters. There are concerns, however, regarding potential EDB, DBCP and/or nitrate contamination of

the aquifer serving the community. OPUD has had to destroy one well (Well No. 3) because of high concentrations of DBCP and EDB. One well (Well No. 6) has been designated as inactive due to high nitrate concentrations.

Wells

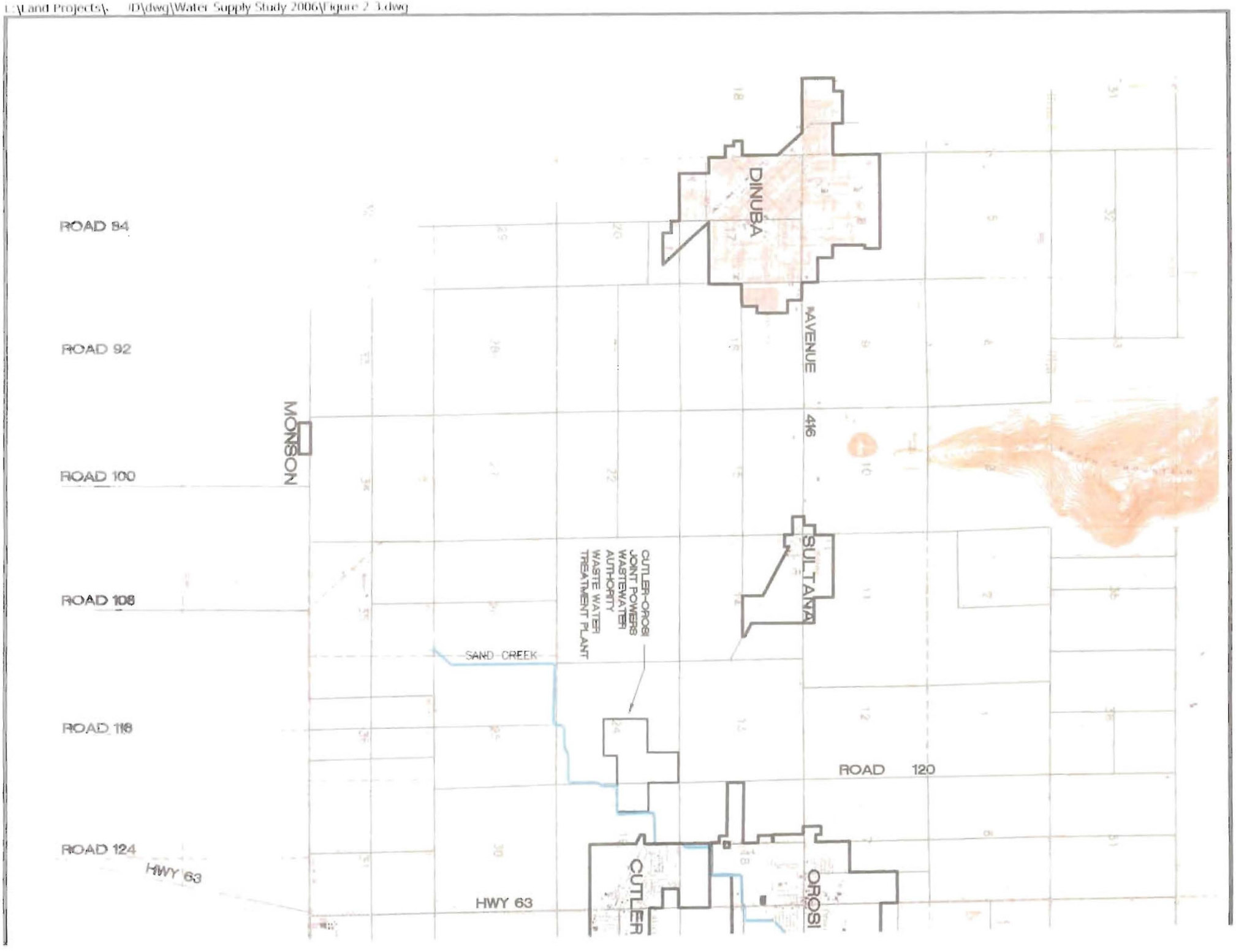
OPUD has a total of six developed wells. The information regarding the active wells is summarized in Table 2-2. Four of the wells are active and two of the wells are inactive at this time. Well No. 6 is inactive and was taken out of service because water test results exceeded the MCL limit for nitrates. Well No. 9 is also considered inactive due to high nitrates and is not connected to the system because of a development dispute. Well Nos. 4, 5A, 7 and 8 are the four active wells that supply water for the community.

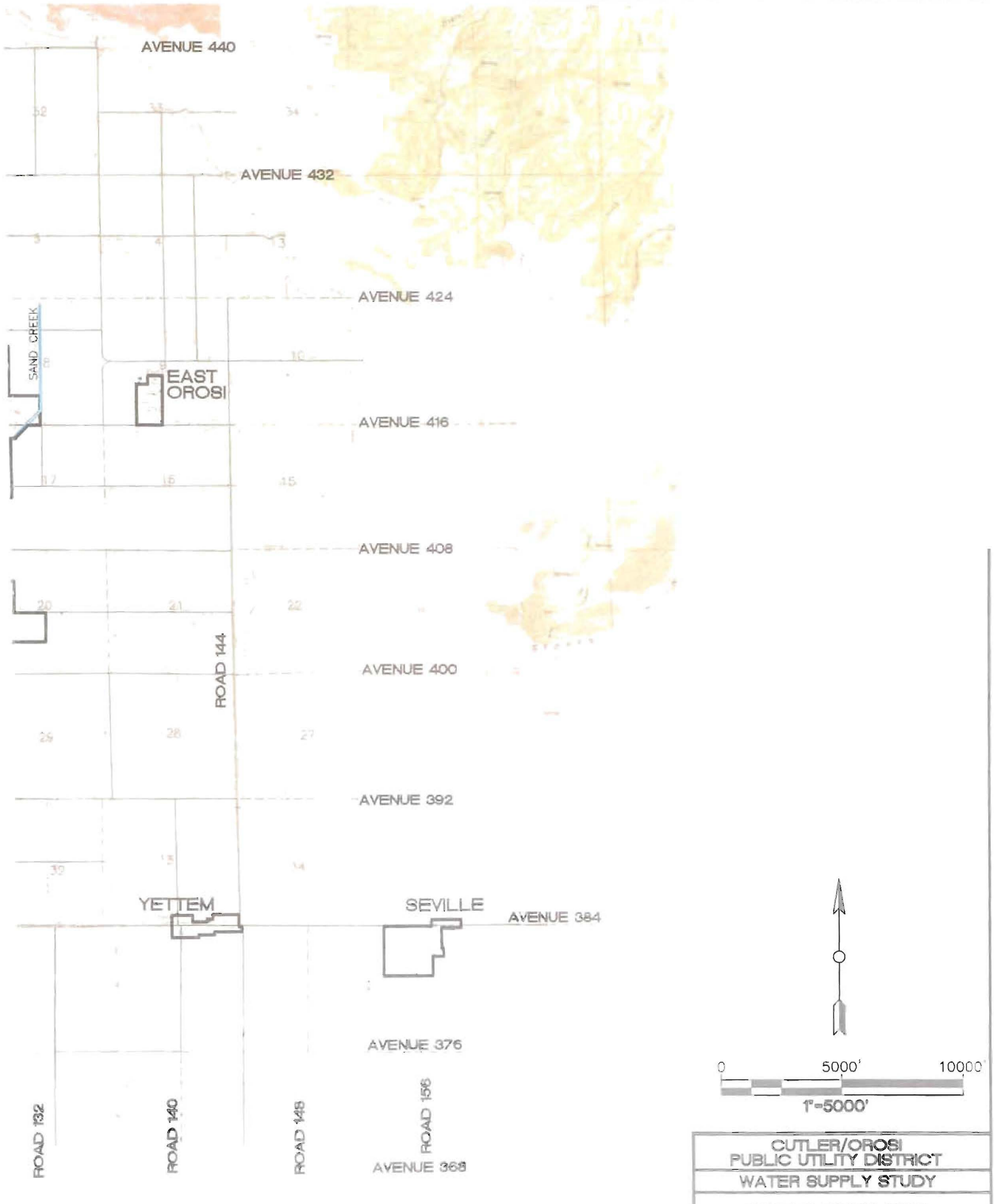
TABLE 2-2
OPUD GROUNDWATER WELLS
WATER SUPPLY STUDY
CUTLER - OROSI AREA

WELL NO.	DATE DRILLED	DEPTH (Feet)	FLOW RATE (g.p.m.)	STATUS
4	1966	425	500-600	Active
5A	1990	433	700	Active
6	1977	291	200-300	Inactive
7	1981	400	600-800	Active
8	1996	455	850	Active
9	1993	400	285	Not connected
10	2006		--	Test hole only
TOTAL WELL CAPACITY			2,650-2,950 (3.8 - 4.2 MGD)	

Storage

OPUD has one ground level water storage tank and four hydropneumatic tanks that also provide some limited water storage. The ground level tank has a capacity of 750,000 gallons and delivers water to the system through two booster pumps located at the site of Well No. 5A. There is a 10,000 gallon hydropneumatic tank at each of the active wells. OPUD's water supply and distribution system is shown on Figure 2-3.





CUTLER/OROSI PUBLIC UTILITY DISTRICT

WATER SUPPLY STUDY

CUTLER-OROSI AREA

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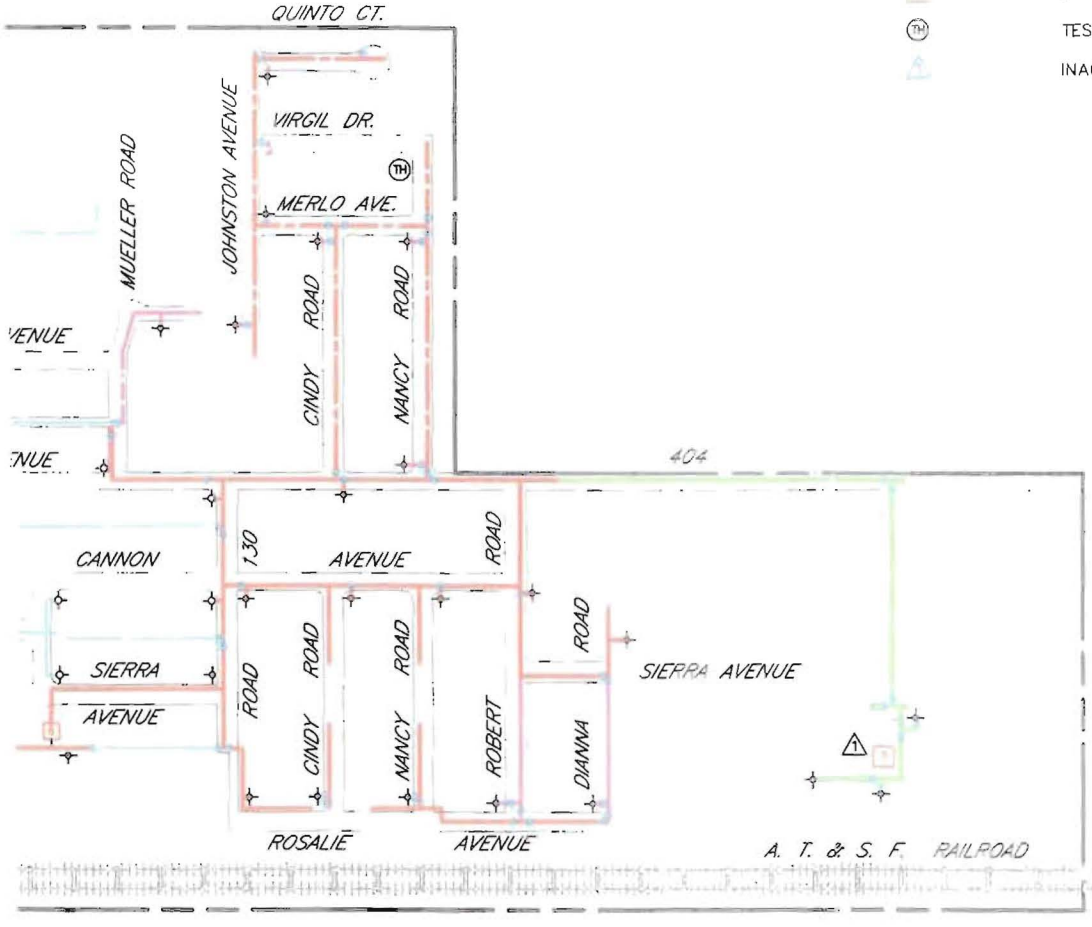
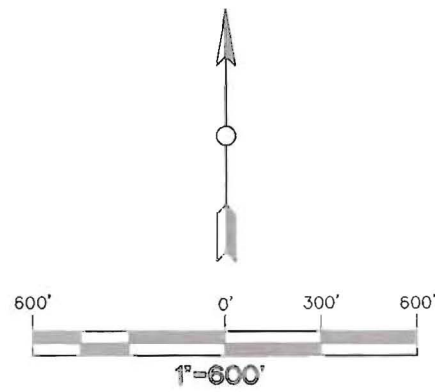
LEGEND

- DISTRICT BOUNDARY
- EXISTING 10" PVC PIPELINE
- EXISTING 8" AC PIPELINE
- EXISTING 8" CAST IRON PIPELINE
- EXISTING 8" PVC PIPELINE
- EXISTING 6" AC PIPELINE
- EXISTING 6" CAST IRON PIPELINE
- EXISTING 6" STEEL PIPELINE
- EXISTING 4" AC PIPELINE
- EXISTING 4" STEEL PIPELINE
- EXISTING 2" STEEL PIPELINE
- EXISTING GATE VALVE
- EXISTING FIRE HYDRANT
- EXISTING WHARF HEAD FIRE HYDRANT
- EXISTING WATER TOWER
- EXISTING WELL SITE AND NUMBER
- TEST HOLE NO. 8
- INACTIVE WELL





CUTLER
PUBLIC UTILITY DISTRICT
WATER SUPPLY STUDY
CUTLER-OROSI AREA

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LEGEND

DISTRICT BOUNDARY

EXISTING BLOW-OFF ASSEMBLY

EXISTING WHARF HEAD TYPE FIRE HYDRANT

EXISTING PUMPER TYPE FIRE HYDRANT WITH SHUT-OFF VALVE

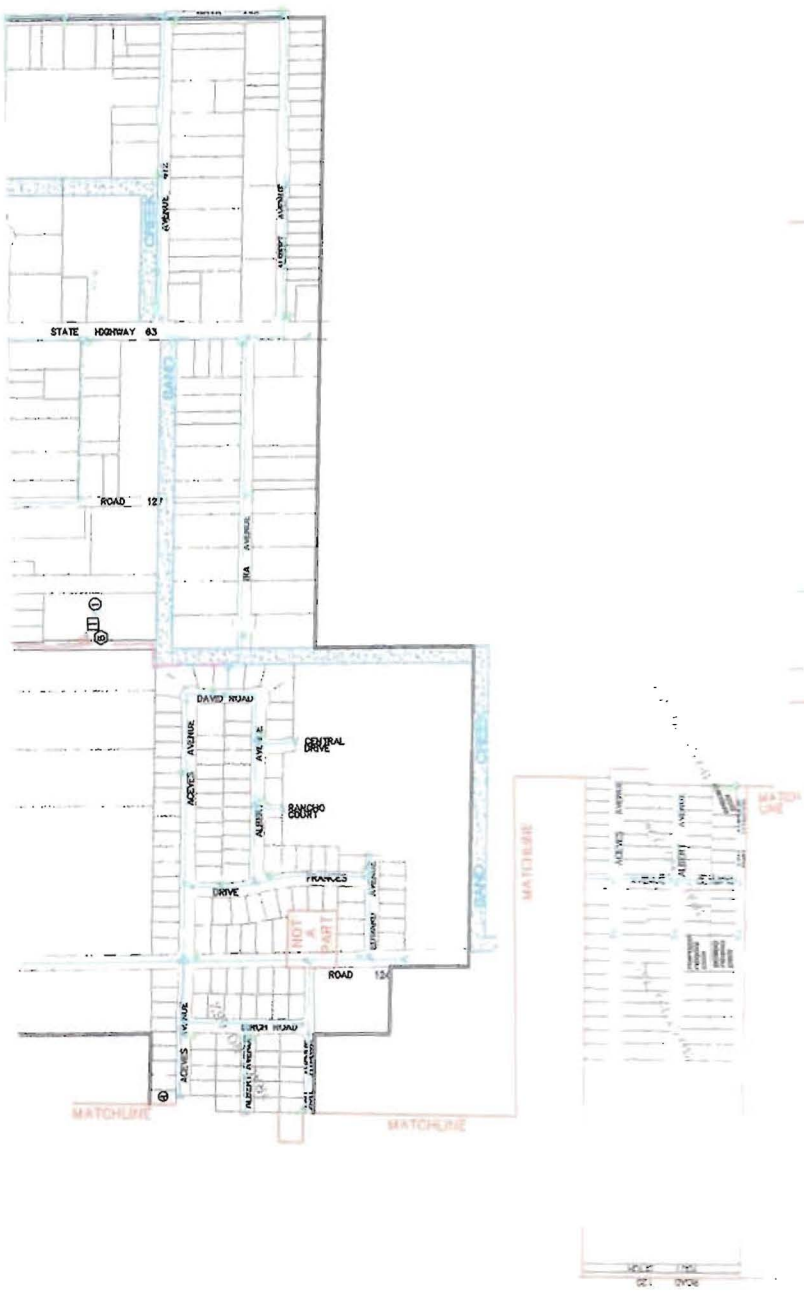
EXISTING GATE VALVE

① EXISTING WELL LOCATION AND NUMBER AS SHOWN. PUMP DISCHARGES INTO HYDROPNEUMATIC TANK.

⑤ EXISTING WELL LOCATION AND NUMBER AS SHOWN. PUMP DISCHARGES INTO STORAGE TANK.

1 EXISTING BOOSTER PUMP LOCATION AND NUMBER AS SHOWN. PUMPS DISCHARGEMATIC INTO HYDROPNEU TANK.

EXISTING 2" STEEL WATER LINE
EXISTING 3" STEEL WATER LINE
EXISTING 4" AC WATER LINE
EXISTING 4" STEEL WATER LINE
EXISTING 6" AC WATER LINE
EXISTING 6" PVC WATER LINE
EXISTING 8" AC WATER LINE
EXISTING 8" PVC WATER LINE
EXISTING 8" DUCTILE IRON WATER LINE
EXISTING 10" AC WATER LINE
EXISTING 10" PVC WATER LINE
EXISTING 10" DUCTILE IRON WATER LINE
EXISTING 12" DUCTILE IRON WATER LINE
EXISTING 16" DUCTILE IRON WATER LINE



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OROSI
PUBLIC UTILITY DISTRICT
WATER SUPPLY STUDY
CUTLER-OROSI AREA

SECTION 3
PROJECTED WATER DEMANDS
WATER SUPPLY STUDY
CUTLER - OROSI AREA

GENERAL

The purpose of this section is to evaluate historical water usage for the Orosi Public Utility District (OPUD) and the Cutler Public Utility District (CPUD) and establish projected water demands. The projected water demands serve as the basis of water supply alternative development.

POPULATION DATA

Table 3-1 summarizes the United States Census population data of the two communities for the period 1980 through 2000. During this time period, the population in Tulare County increased by an average of approximately two percent per year. The present population within the districts are a combination of permanent and seasonal residents. The majority of the residents are employed in the larger urban centers of Tulare County, at industries and businesses located with the Orosi and Cutler areas or on adjacent agriculturally related enterprises. Most of the seasonal residents are employed within the agricultural services industry. There is potential for both moderate population increases and decreases in each community related to fluctuations in the economic environment of this part of Tulare County.

As shown in Table 3-1, Orosi has experienced more consistent growth of the two communities. For the purpose of this study, an annual growth rate of three percent was used. Cutler on the other hand, has experienced more sporadic growth. The most recent census period

documented very little population growth. A population growth rate of one percent was used for population projections within the community of Cutler.

TABLE 3-1
HISTORICAL POPULATION DATA
WATER SUPPLY STUDY
CUTLER - OROSI AREA

	1980	1990	2000	ANNUAL GROWTH RATE (1)
Tulare County	245,738	311,921	368,021	2.04%
Orosi	4,076	5,486	7,318	2.97%
Cutler	3,149	4,450	4,491	1.79%

NOTE:
1. Based upon 20-year population change.

To develop projected populations for the two communities, a facility design period of twenty years was established. Table 3-2 summarizes the population projections for the next twenty years at five-year intervals.

TABLE 3-2
PROJECTED POPULATIONS
WATER SUPPLY STUDY
CUTLER - OROSI AREA

YEAR GROWTH RATE	OROSI 3%	CUTLER 1%
2000	7,318	4,491
2007	9,000	4,815
2012	10,434	5,061
2017	12,096	5,319
2022	14,022	5,590
2027	16,255	5,875

documented very little population growth. A population growth rate of one percent was used for population projections within the community of Cutler.

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2012	10,434	5,061
2017	12,096	5,319
2022	14,022	5,590
2027	16,255	5,875

ESTIMATED WATER USE

Table 3-3 summarizes OPUD's water production for the 10-year period from 1996 to 2005. Based upon the estimated population for that time period, the average water use was 169 gallons per capita per day (gpcd). OPUD, however, completed a water meter installation program in 2004, which resulted in a significant reduction in per capita water use as shown in Table 3-3. Based on the assumption that the water conservation which occurred during the first two years after the installation of the water meters would continue a projected water use in Orosi, of 150 gpcd was used. This per capita daily use represents a balance between historical and the most recent water use trend. The 2027 projected annual water use is estimated to be approximately 900 million gallons which is equivalent to 2.4 million gallons per day (MGD).

Table 3-4 summarizes CPUD's water production from 1996 to 2005. The average water use was approximately 208 gpcd based upon population estimates for this time period. CPUD does not utilize individual water meters on each service. To develop a projected water use amount, 205 gpcd was used. Although water use has been decreasing over the past four years, this per capita daily use reflects a combination of the historical average water use with recent water usage figures. The projected 2027 annual water use in Cutler is estimated to be approximately 440 million gallons (1.2 MGD)

PROJECTED WATER NEEDS

Table 3-5 summarizes each district's current water capacity and projected water demands and needs. A peaking factor was established to estimate the projected peak water demand during the month of highest water use.

TABLE 3-3
OROSI PUBLIC UTILITY DISTRICT HISTORIC AND PROJECTED WATER USE
WATER SUPPLY STUDY
CUTLER-OROSI AREA

Year	Population Estimate (1)	Total Water Production (MG) (2)	Average Use (MGD)	Water Use/Person (gpcd) (3)
1996	6,479	424.03	1.162	179
1997	6,679	462.51	1.267	190
1998	6,886	461.36	1.264	184
1999	7,098	464.22	1.272	179
2000	7,318	457.80	1.254	171
2001	7,538	464.83	1.274	169
2002	7,764	475.95	1.304	168
2003	7,997	469.79	1.287	161
2004	8,236	484.06	1.326	161
2005	8,484	387.77	1.062	125
Average		455.23	1.25	169
Projected Water Use				
2027	16,255	889.96	2.438	150

Notes:
1. Population for Year 2000 based upon census data.
   One percent annual growth used for other years.
2. District data.
3. Based upon estimated population.

TABLE 3-4
CUTLER PUBLIC UTILITY DISTRICT HISTORIC AND PROJECTED WATER USE
WATER SUPPLY STUDY
CUTLER-OROSI AREA

Year	Population Estimate (1)	Total Water Production (MG) (2)	Average Use (MGD)	Water Use/Person (gpcd) (3)
1996	4,314	319.52	0.875	203
1997	4,358	350.19	0.959	220
1998	4,402	332.32	0.910	207
1999	4,446	351.18	0.962	216
2000	4,491	361.42	0.990	220
2001	4,536	342.19	0.938	207
2002	4,581	355.93	0.975	213
2003	4,627	344.79	0.945	204
2004	4,673	342.47	0.938	201
2005	4,720	333.26	0.913	193
Average		343.33	0.94	208
Projected Water Use				
2027	5,875	439.60	1.204	205

Notes:
1. Population for Year 2000 based upon census data.
   One percent annual growth used for other years.
2. District data.
3. Based upon estimated population.

TABLE 3-5
PROJECTED WATER NEEDS
WATER SUPPLY STUDY
CUTLER-OROSI AREA

	CPUD	OPUD
Total Active Water Supply Capacity (1)	1,497 gpm	2,950 gpm
Firm Water Supply Capacity (2)	497 gpm 0.7 MGD	2,100 gpm 3.0 MGD
Projected Average Water Demand (2027)	1.2 MGD	2.4 MGD
Peak Demand Factor	1.7 (3)	1.5 (3)
Projected Peak Water Demand (2027)	2.1 MGD	3.6 MGD
Projected Water Needs - Average Demand (2027)	0.5 MGD	-
Projected Water Needs - Peak Demand (2027)	1.4 MGD	0.6 MGD

Note:
1. See Tables 2-1 and 2-2.
2. Water supply capacity with largest active well out of service.
3. Peak Demand Factor based upon ratio of highest monthly water use to average monthly water use using historical data.

CPUD's lack of water supply capacity affects both existing and projected water needs. Each CPUD well must be in service to meet existing water demands. The existing wells will not be able to meet projected average nor projected peak water demands. Additional water supply is necessary. CPUD needs approximately 1.4 MGD to meet projected peak water demands.

Recent projects completed by OPUD have significantly augmented OPUD's water supply. Well No. 8 increased OPUD's potential water supply. OPUD installed water meters which has resulted in significantly reduced water use. Subsequently, OPUD will not need any additional water supply to meet projected average water demands. OPUD will, however, need an additional 0.6 MGD to meet projected peak water demands.

SECTION 4
TREATMENT PROCESS CONSIDERATIONS
WATER SUPPLY STUDY
CUTLER - OROSI AREA

PURPOSE

The Cutler Public Utility District (CPUD) and Orosi Public Utility District (OPUD) presently rely entirely on groundwater for domestic water supply purposes. Additional water supplies need to be developed to meet projected water needs. Since each district is experiencing elevated nitrates and other contaminants in the local groundwater, the additional water supplies must originate from the treatment of groundwater or from a supplemental surface water supply. Due to drinking water regulations, any surface water supply will require treatment.

The purpose of this section is to present information and data for consideration and subsequent development and to identify treatment process alternatives that address the districts' needs.

DRINKING WATER REGULATIONS

There are several drinking water regulations that warrant special consideration during the development of the Project alternatives for the districts. These regulations are:

1. National Primary Drinking Water Regulations;
2. Long Term 2 Enhanced Surface Water Treatment Rule; and
3. Disinfectant/Disinfection By-Product Rule.

National Primary Drinking Water Regulations (NPDWR)

The NPDWR establishes the current drinking water standards for public water systems.

The standards represent threshold levels of contaminant levels in drinking water. These levels are known as Maximum Contaminant Levels (MCLs). The California Department of Health Services enforces these MCLs, as well as establishes additional MCLs. Contaminant concentrations below the MCLs can be achieved naturally as a result of good source water quality or through treatment to reduce the concentration.

Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

The LT2ESWTR establishes water quality monitoring and treatment requirements for surface water treatment plants and subsequent monitoring. Both districts use groundwater as the only source for their domestic water supply and, therefore, are not presently subject to LT2ESWTR. Development of a surface water treatment plant, however, would require compliance with the LT2ESWTR.

The LT2ESWTR enhances treatment requirements established by the Surface Water Treatment Rule (SWTR) in 1989. The SWTR requires filtration and disinfection of surface water sources. The treatment requirements of the LT2ESWTR are based upon source water monitoring. Monitoring results determine a "bin" placement that establishes the extent of additional treatment requirements.

Disinfectant/Disinfection By-Products (D/DBP) Rule

Each district uses chlorine to accomplish disinfection of its water supply and to provide a disinfectant residual in the distribution system. Subsequently, the districts are subject to the D/DBP Rule.

The D/DBP Rule establishes MCLs for disinfection by-products that result from chlorine disinfection. The rule has two steps. Stage 1 has been in effect for the districts since 2004.

Stage 1 of the D/DBP Rule establishes numerous limits for trihalomethanes and haloacetic acids along with additional monitoring requirements. Stage 2 was promulgated in January, 2006, and will become effective for the districts in April, 2008. Stage 2 of the D/DBP Rule establishes more detailed monitoring and rule compliance measures.

Disinfection by-products are formed when chlorine reacts with organic material (precursors) in the water source. Typically, surface waters have higher concentrations of disinfection by-product precursors as compared to groundwater. Water treatment processes must be designed to reduce precursor concentrations and to implement optimal operation procedures in utilizing disinfection to minimize the formation of disinfection by-products.

WATER QUALITY

Groundwater

Table 4-1 summarizes recent general water quality constituents for OPUD's water supply wells. Overall, the groundwater quality is good. Nitrate and arsenic represent the only constituents of concern. Since elevated nitrate levels exist in Well Nos. 7 and 8., the District has conducted more frequent testing at these locations. Table 4-2 summarizes recent nitrate concentrations for OPUD's active groundwater wells. Historic nitrate concentrations for OPUD's inactive well is summarized in Table 4-3. The arsenic levels in the District's wells are well below the new standard of 10 mg/l.

The groundwater quality for CPUD's water supply wells is very similar to OPUD's groundwater. Table 4-4 presents the test results from CPUD's most recent testing effort. CPUD monitors nitrate and DBCP on a monthly basis due to elevated concentrations. Table 4-5 summarizes recent test results for nitrates and DBCP at CPUD's active wells.. Well No. 6 has

TABLE 4-1
OROSI PUBLIC UTILITY DISTRICT - GROUNDWATER QUALITY
WATER SUPPLY STUDY
CUTLER-OROSI AREA

CONSTITUENTS	Units	Well 4 8/24/04	Well 5A 8/24/04	Well 7 8/24/04	Well 8 8/15/05
Alkalinity (as CaCO3)	mg/L	160	150	190	180
Aluminum (Al) (Primary)	ug/L	< 50.0	< 50.0	< 50.0	< 50.0
Antimony	ug/L	< 6.0	< 6.0	< 6.0	< 6.0
Arsenic (As)	ug/L	2	3	2	3
Barium (Ba)	ug/L	< 100.0	< 100.0	< 100.0	< 100.0
Beryllium	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate (HCO3)	mg/L	200	180	230	220
Cadmium (Cd)	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Calcium (Ca)	mg/L	40	34	48	48
Carbonate Alkalinity(CO3)	mg/L	< 1	< 1	< 1	1
Chloride (Cl)	mg/L	16	11	17	14
Chromium (Total Cr)	ug/L	< 10.0	< 10.0	< 10.0	< 10.0
Color (Unfiltered)	UNITS	< 1	< 1	< 1	1
Copper (Cu)	ug/L	< 50.0	< 50.0	< 50.0	< 50.0
Cyanide	ug/L	< 100.0	< 100.0	< 100.0	< 100.0
Fluoride (F) Temp. Depend.	mg/L	0.1	0.1	0.1	0.1
Hardness (as Ca CO3)	mg/L	160	140	200	190
Hydroxide Alkalinity (OH)	mg/L	< 1	< 1	< 1	1
Iron (Fe)	ug/L	< 100.0	< 100.0	< 100.0	< 100.0
Lead (Pb)	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Magnesium (Mg)	mg/L	16	13	19	17
Manganese (Mn)	ug/L	< 20.0	< 20.0	< 20.0	< 20.0
MBAS (Foaming Agents)	ug/L	< .05	< .05	< .05	0.05
Mercury (Mn)	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Nickel	ug/L	< 10.0	< 10.0	< 10.0	< 10.0
Nitrate (NO3)	mg/L	20	16	26	32
Odor Threshold at 60° C	TON	1	1	1	1
pH (Laboratory)	Std Units	8	8.1	8	8.2
Potassium (K)	mg/L	3	3	3	4
Selenium (Se)	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Silver (Ag)	ug/L	< 10.0	< 10.0	< 10.0	< 10.0
Sodium (Na)	mg/L	21	20	24	25
Specific Conductance (E.C.)	umhos/cm	390	330	450	470
Sulfate (SO4)	mg/L	9	6	14	ND
Thallium	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Total Filterable Residue at 180° C (TDS)	mg/L	280	250	320	330
Turbidity (Lab)	NTU	< .1	0.2	< .1	0.2
Zinc (Zn)	ug/L	< 50.0	< 50.0	< 50.0	< 50.0

TABLE 4-2
OROSI PUBLIC UTILITY DISTRICT - NITRATE DATA FOR ACTIVE WELLS
WATER SUPPLY STUDY
CUTLER-OROSI AREA

Sample Date	Well 4 NO3 (mg/L)	Well 5A NO3 (mg/L)	Well 7 NO3 (mg/L)	Well 8 NO3 (mg/L)
2/10/04				19
3/23/04			29	
4/27/04			26	30
8/24/04	20	16	26	39
11/9/04			33	17
1/20/05			34	25
2/8/05			32	18
5/10/05			37	25
8/15/05	20	16	24	32
12/13/05			33	43
6/6/2006			36	18
8/8/2006	22	18	32	21
Average	21	17	31	26
Maximum	22	18	37	43
Minimum	20	16	24	17
No. of Samples	3	3	11	11

TABLE 4-3
OROSI PUBLIC UTILITY DISTRICT - NITRATE DATA FOR INACTIVE WELLS
WATER SUPPLY STUDY
CUTLER-OROSI AREA

Sample Date	Well 6 NO3 (mg/L)
9/21/89	21
7/14/92	198
9/29/92	39.8
7/5/94	44
9/29/94	168
11/3/94	138
12/12/94	120
7/17/02	140
Average	109
Maximum	198
Minimum	21
No. of Samples	8

TABLE 4-4
CUTLER PUBLIC UTILITY DISTRICT - GROUNDWATER QUALITY
WATER SUPPLY STUDY
CUTLER-OROSI AREA

CONSTITUENTS	Units	Well 05 8/10/04	Well 06 8/10/04
Alkalinity (as CaCO3)	mg/L	200	170
Aluminum (Al) (Primary)	ug/L	< 50.0	< 50.0
Antimony	ug/L	< 6.0	< 6.0
Arsenic (As)	ug/L	3	3
Barium (Ba)	ug/L	140	140
Beryllium	ug/L	< 1.0	< 1.0
Bicarbonate (HCO3)	mg/L	200	170
Cadmium (Cd)	ug/L	< 1.0	< 1.0
Calcium (Ca)	mg/L	55	44
Carbonate Alkalinity(CO3)	mg/L	< 1	< 1
Chloride (Cl)	mg/L +	29	22
Chromium (Total Cr)	ug/L	< 10.0	< 10.0
Color (Unfiltered)	UNITS	< 1	< 1
Copper (Cu)	ug/L	< 50.0	< 50.0
Cyanide	ug/L	< 100.0	< 100.0
Dibromochloropropane (DBCP)	ug/L	0.039	0.19
Fluoride (F) Temp. Depend.	mg/L	0.2	0.1
Hardness (as Ca CO3)	mg/L	220	180
Hydroxide Alkalinity (OH)	mg/L	< 1	< 1
Iron (Fe)	ug/L	< 100.0	< 100.0
Lead (Pb)	ug/L	< 5.0	< 5.0
Magnesium (Mg)	mg/L	20	16
Manganese (Mn)	ug/L	< 20.0	< 20.0
MBAS (Foaming Agents)	ug/L	< 0.05	< 0.05
Mercury (Mn)	ug/L	< 1.0	< 1.0
Nickel	ug/L	< 10.0	< 10.0
Nitrate (NO3)	mg/L	31	26
Odor Threshold at 60° C	TON	1	1
pH (Laboratory)	Std Units	8	8
Potassium (K)	mg/L	4	3
Selenium (Se)	ug/L	< 5.0	< 5.0
Silver (Ag)	ug/L	< 10.0	< 10.0
Sodium (Na)	mg/L	32	30
Specific Conductance (E.C.)	umhos	530	450
Sulfate (SO4)	mg/L +	20	13
Thallium	ug/L	< 1.0	< 1.0
Total Filterable Residue at 180° C (TDS)	mg/L +	360	310
Turbidity	NTU	< 0.1	0.1
Zinc (Zn)	ug/L	< 50.0	< 50.0

TABLE 4-5
CUTLER PUBLIC UTILITY DISTRICT - NITRATE AND DBCP DATA FOR ACTIVE WELLS
WATER SUPPLY STUDY
CUTLER -OROSI AREA

Sample Date	Well No. 5		Well No. 6	
	Nitrate (NO3) (mg/L)	DBCP (ug/L)	Nitrate (NO3) (mg/L)	DBCP (ug/L)
2/10/04	31	0.03		
3/2/04			40	0.16
4/27/04			35	0.16
5/20/04	30	0.3 (1)	46	0.16
6/8/04			36	0.14
7/27/04			43	0.2
8/10/04	31	0.039	26	0.19
8/20/04			40	0.16
9/7/04			48	0.17
9/10/04			28	
9/14/04			49	
10/26/04			35	0.22
11/2/04		0.045	38	0.26
11/23/04				0.16
12/20/04			46	
1/4/05			39	0.2
2/1/05	35	0.061	41	0.18
3/1/05			32	0.21
4/5/05			30	0.24
4/25/05				0.19
5/17/05	40	0.036	33	0.22
6/7/05			48	0.22
6/13/05			26	
7/5/05			30	0.21
8/15/05	31	0.045	48	0.15
8/29/05			48	
9/1/05			25	
9/20/05			27	0.23
10/4/05			46	
10/10/05			31	
12/27/05			39	0.22
12/30/05	31	0.075		
3/14/06	< 2 (1)		36	0.22
4/4/06			34	0.23
5/2/06	38	0.036	29	0.32
6/6/06			26	0.23
7/11/06			32	0.2
8/8/06	33	0.048	31	0.23
Average	33	0.05	37	0.20
Maximum	40	0.08	49	0.32
Minimum	30	0.03	25	0.14
No. of Samples	9	9	34	28

Note:
1. Result is considered not typical when compared to other data.
Potential sampling or analytical error.

exceeded the MCL for nitrate on several occasions. Table 4-6 summarizes nitrate concentrations at CPUD's inactive wells. Like OPUD, the arsenic levels in the CPUD wells are well below the new standard of 10 mg/l.

As evidenced by the testing results, nitrates are impacting the groundwater in the community. Locating a groundwater source in the Cutler-Orosi area that is low in nitrates, has been and will continue to be difficult. The future use of existing wells may also be jeopardized by increasing nitrate levels. Although arsenic levels are well below current regulatory standards, the potential for more stringent standards exist, which may subsequently require a need for treatment.

Surface Water

There is no natural surface water supply in the vicinity of the districts. A surface water supply for domestic purposes will have to be transported to the area through Alta Irrigation District's open channels, the Friant-Kern Canal, a dedicated pipeline or a combination of all three. The Alta Irrigation District surface water supply originates in the Kings River watershed, with their headgate on the Kings River being located downstream of Piedra. Storage of their water supply is provided by Pine Flat Dam.

The districts conducted a short-term surface water testing program to compile preliminary data for consideration in the selection of a treatment process. The samples were collected at the head of the Alta Irrigation District's Tout Ditch which is located near Avenue 120, just northwest of Orosi. Table 4-7 summarizes the testing results for the routine samples. In addition, a detailed analysis for water quality constituents was conducted. Table 4-8 summarizes the detailed water quality results.

TABLE 4-6

CUTLER PUBLIC UTILITY DISTRICT - NITRATE AND DBCP DATA FOR INACTIVE WELI WATER SUPPLY STUDY

CUTLER-OROSI AREA

Sample Date	Well No. 3	Well No. 4
	Nitrate (NO3) (mg/L)	Nitrate (NO3) (mg/L)
11/27/91	61	
2/13/92	62	
3/7/92	57	
4/7/92	59.5	
9/17/97		44
12/19/97		47
9/23/98		48
12/3/98		49
Average	60	47
Maximum	62	49
Minimum	57	44
No. of Samples	4	4

TABLE 4-7
SURFACE WATER TESTING RESULTS (1)
WATER SUPPLY STUDY
CUTLER-OROSI AREA

PARAMETER	UNITS	SAMPLE TYPE AND DATE														Average	No. of Samples
		Flood 4/6/2006	T22 7/6/2006	7/13/2006	7/20/2006	7/27/2006	8/3/2006	Expanded 8/10/2006	8/17/2006	8/24/2006	8/31/2006	9/7/2006	Expanded 9/14/2006	9/21/2006	9/28/2006		
Turbidity	NTU	67	-	2.2	2.6	2.3	2.0	-	3.1	1.8	1.4	1.8	-	1.4	1.5	2.0	10
Coliform, Total	MPN/100 ml	-	-	-	> 23	-	> 23	Present	> 23	-	-	50	300	-	50	78.2	6
Coliform, Fecal (E. Coli)	MPN/100 ml	-	-	-	> 23	-	16.1	Present	23	-	-	23	No Sample	-	30	23.0	5
Temperature	Deg F	-	-	63	64	65	65	-	-	65	-	69	-	-	66	65.3	7
pH	-	7.9	7.5	-	-	-	-	7.2	-	-	-	-	7.1	-	-	7.3	3
Conductivity (EC)	umho/cm	220	28	-	-	-	-	-	-	-	-	-	-	-	-	28	1
Dissolved Organic Carbon (DOC)	mg/l	9.2	-	-	-	-	-	1.3	-	-	-	-	0.78	-	-	1.0	2
Total Dissolved Solids (TDS)	mg/l	210	32	-	-	-	-	21	-	-	-	-	23	-	-	25.3	3
Total Organic Carbon (TOC)	mg/l	13	-	-	-	-	-	1.3	-	-	-	-	0.95	-	-	1.1	2
Total Suspended Solids (TSS)	mg/l	67	-	-	-	-	-	< 5	-	-	-	-	< 5	-	-	< 5	2
Alkalinity	mg/l	-	29	-	-	-	-	11	-	-	-	-	11	-	-	17	3
Bicarbonate	mg/l	-	29	-	-	-	-	11	-	-	-	-	11	-	-	17	3
Calcium	mg/l	-	3.1	-	-	-	-	2.1	-	-	-	-	2	-	-	2.4	3
Carbonate	mg/l	-	< 1	-	-	-	-	< 1	-	-	-	-	< 1	-	-	< 1	2
Hardness	mg/l	-	10	-	-	-	-	0.9	-	-	-	-	6.6	-	-	5.8	3
Hydroxide	mg/l	-	< 1	-	-	-	-	< 1	-	-	-	-	< 1	-	-	< 1	2
Magnesium	mg/l	-	0.67	-	-	-	-	0.4	-	-	-	-	0.38	-	-	0.5	3

Note:
1. Location: Tout Ditch, Alta Irrigation District; water source - Kings River.

TABLE 4-8
SURFACE WATER CHARACTERIZATION (1)
WATER SUPPLY STUDY
CUTLER-OROSI AREA

Parameter	Units	Date 7/6/2006
Alkalinity	mg/l	29
Aluminum	mg/l	0.19
Antimony	ug/l	< 2
Arsenic	ug/l	< 2
Barium	mg/l	< 0.05
Bicarbonate	mg/l	29
Cadmium	ug/l	< 1
Calcium	mg/l	3.1
Carbonate	mg/l	< 1
Chloride	mg/l	< 1
Chromium - Total	ug/l	< 10
Color	units	15
Conductivity (EC)	umho/cm	28
Copper	ug/l	< 50
Cyanide	ug/l	< 20
Fluoride	mg/l	< 0.1
Hardness	mg/l	10
Hydroxide	mg/l	< 1
Iron	mg/l	0.21
Langlier Index		-1.8
Lead	ug/l	< 5
Magnesium	mg/l	0.67
Manganese	mg/l	< 0.01
MBAS (Surfactants)	mg/l	< 0.05
Mercury	ug/l	< 0.4
Nickel	ug/l	< 10
Nitrate	mg/l	< 1
Nitrite	mg/l	< 0.05
Odor	TON	1.0
pH	-	7.5
Potassium	mg/l	< 2
Selenium	ug/l	< 2
Silver	ug/l	< 10
Sodium	mg/l	1.7
Sulfate	mg/l	< 2
Thallium	ug/l	< 1
Total Dissolved Solids	mg/l	32
Turbidity	NTU	2.5
Zinc	mg/l	< 0.05

NOTES:
(1) Samples collected 7/6/06.
Location: Alta Irrigation District, Tout Ditch.
Source: Kings River.

The water quality of the surface water is good and can be considered typical of summer (post-runoff) high Sierra waters. The water has a low turbidity and solids concentrations. The water's alkalinity is also low which may affect the selection of potential treatment options.

Summary

In general, the groundwater quality in the area is relatively good. Existing and future nitrate concentrations present concerns for both districts. DBCP contamination remains a concern to CPUD.

The water quality of the most convenient surface water supply is excellent. The test results do not reveal any constituent warranting special concerns. The water appears suitable for domestic purposes with standard treatment processes.

TREATMENT ALTERNATIVES

The treatment options available to the districts can be divided into two primary categories: groundwater treatment and surface water treatment.

Groundwater Treatment

There are several alternatives available to accomplish groundwater treatment. One option is to blend high nitrate water with low nitrate water originating from a new water source (i.e., new well). Blending is an acceptable nitrate reduction approach to the Department of Health Services. Based upon the existing groundwater quality data, however, it appears unlikely that a suitable blending source (i.e., an additional well) with a sufficiently low nitrate concentration can be identified. Treatment of an existing source would likely be necessary to facilitate a blending alternative.

Ion exchange and reverse osmosis represent two available treatment technologies for removing nitrates from the groundwater. The ion exchange process utilizes a resin specifically designed for removing a target containment. The resin attracts the contaminant and subsequently removes the contaminant from the water by binding with it. Reverse osmosis is a membrane based process in which contaminants are removed under pressure onto a membrane barrier. Treated water permeates the membrane while the contaminants are rejected by the membrane.

Surface Water Treatment

Due to existing and recently enacted regulations governing surface water treatment, the surface water treatment processes available to the districts will need to demonstrate minimum performance standards. Presently, surface water treatment must accomplish 99.9 percent removal of Giardia lamblia and 99.99 percent removal of viruses through filtration and disinfection. Most conventional treatment processes can accomplish these goals through proper design and operation.

Under the LT2ESWTR, monitoring results for cryptosporidium in the source water can require enhanced treatment requirements. Preliminary research into the presence of giardia and cryptosporidium levels in high Sierra Mountain waters have shown them to be present at low levels. For the purposes of this study, a total of 99.99 percent of giardia and cryptosporidium removal must be achieved for surface water supply. The required removal percentage can be achieved using either conventional treatment on alternative treatment processes. Actual giardia and cryptosporidium concentrations will need to be established through monitoring prior to final design of any surface water treatment process.

Conventional filtration and disinfection generally cannot achieve the anticipated giardia/cryptosporidium removal requirements without process and operational enhancements and controls. An alternate disinfectant, such as ultraviolet (UV) light may also be required in combination with chlorine, to reduce the potential for increased disinfection by-products formation.

An alternate treatment process to conventional filtration is the use of membrane filtration. Micro filtration and ultra filtration membranes can achieve up to 99.9999 percent removal of giardia and cryptosporidium. The reason these processes can achieve the higher removal rates is due to the very small pore openings in the membranes of less than 0.1 micron (μm; 1/25,000th of an inch).

GROUNDWATER TREATMENT CONSIDERATIONS

Three methods of groundwater treatment were identified for consideration as an alternative to developing a surface water supply to meet the districts' projected water demands. The purpose of this section is to present preliminary considerations for each method and identify the groundwater treatment method that will be developed in greater detail.

Blending

Blending of different source water supplies is an acceptable nitrate reduction approach to the Department of Health Services. Several drawbacks exist, however, to implement this approach in the Cutler - Orosi area. First, there have not been any low nitrate groundwater sources identified within the districts, as nitrates have been found throughout the local groundwater at various concentrations. In addition, suitable well sites are not readily available.

Blending does not address the presence of nitrates in the groundwater and its effectiveness will be limited to the nitrate levels of the source groundwater. Blending, therefore, will not be considered further as a permanent groundwater treatment method.

Ion Exchange

Ion exchange represents an alternative that removes nitrates from the water supply. The ion exchange process consists of using resins designed specifically to remove nitrates from the water source. During operation, nitrate laden water contacts the resin on which the nitrates are attached through an electrochemical exchange. Once the resin loses its exchange capability, it is recharged by rinsing with a brine solution to remove the nitrates from the resin. The rinseate can be disposed of in the sanitary sewer if the local wastewater treatment facility has the capability and available capacity. Otherwise, other approved means will be necessary.

Ion exchange presents several advantages. First, nitrates are removed through treatment. In general, variable nitrate levels will have little effect on removal efficiencies. In addition, there exists flexibility in treatment capacities to incorporate a blending approach. The primary disadvantage to the ion exchange process is the resin regeneration by-products. Special handling considerations will be necessary if the by-products cannot be discharged to the sewer system and treated at the regional wastewater facilities.

Reverse Osmosis

Reverse osmosis is another treatment technology that is capable of removing nitrates. Reverse osmosis utilizes a membrane to remove contaminants dissolved in the water. The groundwater is fed into a pressurized vessel in which the water is forced through the membrane. Treated water passes through the membrane as the contaminants are retained at the membrane's

surface. The membranes are cleaned periodically to prevent fouling and to maintain their performance.

There are several advantages to reverse osmosis. Nitrates are physically removed from the source water through reverse osmosis. Reverse osmosis will remove other contaminants as well, including dissolved contaminants. Treatment capacities can be adjusted to utilize blending to achieve target nitrate levels, thereby reducing the capital and operational costs of the treatment equipment. There are, however, several disadvantages to a reverse osmosis process. A pretreatment system consisting of ultra-filtration can be required to ensure effective and proper operation of the reverse osmosis process. Due to the complexity of the reverse osmosis process and pretreatment requirements, capital costs are higher when compared to other treatment technologies. Finally, the treatment residuals and associated wastewater may require special handling, including pretreatment, prior to disposal.

For the purpose of this study, the ion exchange process has been selected for detailed consideration as the treatment alternative for nitrate removal from the groundwater. The ion exchange method was selected for the following reasons:

1. The process provides nitrate removal;
2. Blending can be incorporated with the process;
3. The handling of treatment residuals is less problematic due to the selective nature of the resin; and
4. Capital and operational costs for ion exchange will be less than reverse osmosis as a result of a more simplified treatment process.

Surface Water Treatment Considerations

An alternative to groundwater treatment is the use of surface water as a domestic water source. For the purposes of this report and subsequent evaluations, it is assumed that a surface water supply has been identified and can provide an adequate amount of water to meet the districts' water demands.

Surface water treatment will need to be accomplished through a combination of conventional treatment and filtration, membrane filtration and disinfection. Each element has specific considerations that will help formulate the preferred approach for detailed consideration.

Filtration

Conventional treatment and filtration consists of coagulation/flocculation and sedimentation processes followed by single or dual media gravity filters. Chemicals are added during coagulation to improve the settling characteristics of suspended material in the water. The filters are used to remove the very fine suspended material that could not be removed by sedimentation. The primary advantage to this approach is that the process has been proven effective and has been utilized on various surface waters for decades. Design and operation is straightforward. Several disadvantages exist for the conventional treatment process. First, conventional treatment will not achieve the new treatment removal standards as required by the LT2ESWTR without the use of appropriate disinfection practices. Second, the excellent water quality of the proposed surface water supply may prove problematic for efficient conventional treatment processes and result in poor cost effectiveness.

Direct filtration, another surface water treatment process, eliminates the use of the sedimentation process. Untreated surface water flows thrugh the coagulation/flocculation

process and then is applied directly to a single or dual media filter either by gravity or under pressure. Direct filtration is primarily used on high quality surface waters. It is a proven treatment process that greatly simplifies treatment operations. Typically, it is less costly than conventional treatment. Direct filtration does not, however, handle significant water quality variations readily. In addition, there are increased treatment removal standards in the LT2ESWTR which are higher than those established for conventional treatment.

Membrane filtration is a comparatively new treatment process. It is becoming more prevalent due to increased treatment regulations and improving cost competitiveness with other treatment processes. The primary advantage of membrane filtration is that this process can fully achieve the cryptosporidium removal requirements of the LT2ESWTR. The removal credit is established by demonstration testing, certification and operational monitoring. Another advantage to membrane filtration is that the technology configuration is packaged in modular units which provide streamlined construction and expansion. Backwash and treatment residuals can be handled in a similar manner to that of conventional treatment. The primary disadvantage to membrane filtration is that variable water quality can adversely impact membrane performance and operation.

For the purpose of this study, membrane filtration has been selected for detailed development of the filtration element of surface water treatment. The selection of membrane filtration as the treatment method of choice was based on the following reasons:

1. Membrane filtration can provide giardia and cryptosporidium removal levels that meet the LT2ESWTR; and

2. Membrane filtration is modular and components are integrally designed making initial construction and future expansion straightforward.

Disinfection

There are several options available to the districts for consideration of disinfection practices. The options consist of chlorination, chloramination, UV disinfection, ozonation and chlorine dioxide.

Chlorination utilizes chlorine to accomplish disinfection. The process can use gaseous or liquid chlorine or sodium hypochlorite. The districts currently use liquid sodium hypochlorite at each of the individual well site. Chlorine is a strong disinfectant and provides a lasting residual in the water for continued disinfection. Its use, however, produces disinfection by-products (DBPs), especially when used with surface waters. Regulations limiting the DBP levels in drinking water will affect the operational practices for chlorination. Liquid and gaseous chlorine also have special safety and handling requirements.

Chloramination combines chlorine and ammonia to form the disinfectant. Chloramines are a weaker disinfectant than chlorine, but provide a longer lasting residual. A common practice is to utilize chlorine as the primary disinfectant at the treatment plant and then combine with ammonia to provide chloramines within the distribution system for residual disinfection. A concern with the use of chloramines is the potential for the formation of nitrates in the distribution system. Utilizing chloramination disinfection also requires the handling and storage of two chemicals.

Ultra-violet (UV) light disinfection is more common in wastewater treatment. Its use, for drinking water, however, is increasingly becoming more prevalent due to germicidal

effectiveness and the new regulations regarding DBP formation in the distribution systems. UV disinfection consists of utilizing mercury vapor lamps that produce ultraviolet light which destroys disease causing organisms. UV disinfection has several advantages:

1. UV disinfection provides proven disinfectant effectiveness that exceeds the new disinfection/requirements;
2. UV light does not produce DBPs; and
3. There are also several different configurations of UV disinfection available which provide design and operational flexibility.

UV does not, however, provide a residual disinfection in the water supply, and, therefore, requires a second disinfectant to maintain a disinfection residual in the distribution system. Another disadvantage to UV disinfection is that it requires a large amount of power.

Ozonation is a proven water treatment disinfectant. Ozone is produced by directing oxygen gas between dielectric plates to convert oxygen into ozone. Ozone is a strong disinfectant that dissipates rapidly in water, and, like UV, it does not provide a lasting residual. Although ozone does not produce chlorinated DBPs, it may produce ozonated DBPs when treating certain surface waters. Since ozone does not produce a lasting disinfectant residual, an additional disinfectant is typically required. Another disadvantage in using ozone as a disinfection is that ozone production is a complicated process which utilizes highly technical equipment and requires a large amount of power.

Chlorine dioxide is also a proven water treatment disinfection, although its use is not as common as the other disinfectants. Chlorine dioxide is created by mixing chlorine and sodium chlorite. It is a strong disinfectant that does not produce trihalomethane or haloacetic acid DBPs.

Chlorine dioxide does, however, produce other regulated DBPs. In general, the chlorine dioxide process represents complicated operational considerations, although simplified designs are becoming available.

For the purposes of this study, the selected disinfection practices for detailed development will be UV light for use at the water treatment plant and chlorination for the distribution system disinfection. For chlorination, a liquid sodium hypochorite system will be considered. This combination of disinfection methods were selected for the following reasons:

1. UV disinfection can achieve the required disinfection levels without DBP formation;
2. Design and operation of the UV process is straightforward. It does not involve any complex technologies; and
3. Utilizing chlorine in the distribution system maintains the current practice for the existing groundwater wells. There is little likelihood of taste and odor problems resulting from mixing disinfectants.

SECTION 5
TREATMENT PROCESS COMPARISONS
WATER SUPPLY STUDY
CUTLER-OROSI AREA

GENERAL

Based upon projected water demands and existing groundwater quality issues regarding contaminants, the Cutler Public Utility District (CPUD) and the Orosi Public Utility District (OPUD), additional water supply and treatment will be necessary.

Section 4 described the preliminary review of the feasible treatment of options for the districts. Two options have been identified for further development and comparison:

1. Ion exchange for nitrate removal from existing groundwater resources (wells); and
2. Membrane filtration and UV disinfection of surface water.

This section develops each treatment process in greater detail to facilitate evaluation and comparisons.

GROUNDWATER TREATMENT

An ion exchange process to remove nitrate from the districts' existing groundwater supplies represents the most feasible treatment process for groundwater.

Process Description

A typical process schematic for the ion exchange process is shown on Figure 5-1. Ion exchange utilizes engineered resin material to remove the nitrate from the water. High nitrate water flows through treatment vessels that contain resin. The water contacts the resin within the

vessel and flows out of the vessel. Nitrate concentrations in the treated water are very low, typically less than 5 mg/l. The treated water is blended with groundwater to achieve a target nitrate concentration. This blending approach reduces the overall size of the ion exchange process and the quantity of resin per volume of treated water that must be regenerated.

When the resin is no longer removing nitrate as determined by monitoring equipment, the resin must be regenerated. Multiple ion exchange modules are utilized to ensure water production during the resin regeneration process. Resin regeneration consists of pumping a brine solution into the resin modules to remove the nitrates from the resin. The rinseate requires disposal into the sewer or other approved means.

Conceptual Design

The design and configuration of the ion exchange process is straightforward. In general, ion exchange processes are modular package-treatment type systems. Using water quality data, the ion exchange manufacturer sizes and configures equipment to complete an ion exchange system.

The ion exchange process typically includes resin vessels, resin media, distributor and underdrain systems, interconnecting piping, brine make-up system, flow meters, electrical, controls, alarms and appurtenances. The equipment can be skid-mounted to simplify construction. To provide safe year-round access to the equipment and optimal operating conditions, it is proposed that the ion exchange process be installed inside a building structure.

The districts currently use liquid sodium hypochlorite for chlorine disinfection at each of their wells. It is proposed this same type of system be utilized at groundwater treatment locations.

Due to the quantities of brine required to accomplish regeneration and other chemical uses , on-site chemical storage will also be required.

Locations

Each district has unique considerations regarding potential locations for the nitrate removal process. In Cutler, CPUD's inactive wells are located approximately 400 feet apart. CPUD also has set aside a centrally located site for a potential blending project. This site is approximately 900 feet away from the inactive wells. CPUD's active wells (Well Nos. 5 and 6) are within 2,000 feet of the site. Due to the availability of the tentative blending project site, CPUD's ion exchange equipment should be located there. The location is shown in Figure 5-2. A detailed layout of the site is shown in Figure 5-2.

Presently, OPUD has two wells (Well No. 6 and Well No. 9) that are unavailable due to high nitrates. These wells are located on opposite sides of the community. In addition, OPUD's remaining wells are spread throughout the District.

OPUD does not own any property within the central portion of the community that could serve as a treatment system location. Therefore, OPUD's ion exchange treatment process approach will consist of treatment units at each well site for Well Nos. 6 and 9. A typical well site layout is shown in Figure 5-3. Actual site conditions and dimensions will require adjustments to the location of equipment and/or modifications to configuration (design) of the equipment.

Waste Disposal Options

A brine solution is used to regenerate the ion exchange resin. Upon completion of the regeneration process, the nitrate-laden solution must be disposed. Common disposal options are:

1. Discharging to the local sewer for treatment at a wastewater facility;
2. Injection into a deep well;
3. Use of evaporation ponds; and
4. Contract disposal at an approved facility.

The quantity of regeneration rinseate will be a function of nitrate levels, ion exchange resin, process design and flow. Based upon preliminary design concepts proposed by various manufacturers, the regeneration flow could vary between 30,000 gallons per day (gpd) to as high as 76,000 gpd, depending on design and regeneration frequency. Nitrate concentrations in the regeneration byproduct could be as high as 3,300 mg/l. High concentrations of sulfides (1,000 mg/l) and chlorides (10,500 mg/l) will also be present.

Ideally, discharging the regeneration product into the sewer system for subsequent treatment and disposal would represent the solution for handling the ion exchange waste products. The districts however, have discharge limitations established in their respective wastewater ordinances. Pretreatment or dilution prior to discharge will be necessary. Pretreatment to reduce the constituents represents a costly approach as separate processes would be required for each constituent. Dilution of the regeneration product is also not feasible due to the high volume of water needed for blending of the waste product to achieve acceptable discharge concentrations. Sewer discharge of the regeneration product is, therefore, not feasible.

Deep well injection represents another waste disposal approach. This disposal consists of pumping the waste into a deep groundwater aquifer. This approach is not feasible in the Cutler Orosi area since there are no confining soil layers that isolate water bearing layers. This

approach also requires state regulatory approvals. No such disposal practices currently exist in the region.

Evaporation ponds provide another method for regeneration product disposal. This approach consists of storing the water in ponds to allow evaporation. The ponds would be designed with liners to prevent percolation and protect the groundwater. This approach is straightforward, however, a significant amount of land would be required. The size of the ponds would be dependent on waste discharge flow, precipitation and evaporation rates. For a waste discharge of 30,000 gallons per day, approximately 7.5 acres of ponds would be required under normal climatic conditions. Larger ponds would be necessary to accommodate "wet" rainfall years. The ponds would have to be cleaned of solids on an intermittent basis. Due to the high levels of nitrates and other degeneration byproducts, pond design and disposal of pond solids may require special permitting from the Regional Water Quality Control Board.

The last option available to the districts for regeneration product disposal is hauling the product to an appropriate disposal site. This option would consist of temporary storage tanks and contracted handling and disposal. An advantage to this approach is the districts do not have to provide and operate disposal facilities. If contract disposal were utilized, the districts would be responsible for all contract conditions, including fee increases. In general, disposal occurs at large wastewater treatment facilities where small quantities of waste do not impact overall wastewater treatment effectiveness. Since there are few large wastewater facilities nearby, it is likely that the total disposal will be impacted by the transportation fees which reflect the distance to the facility.

Considerations for regeneration disposal present serious drawbacks to the ion exchange process. Evaporation ponds and contract work disposal represent the most feasible approaches. Evaporation ponds provide significant capital cost considerations for an ion exchange approach. Contract waste disposal presents annual cost that need to be considered with an ion exchange approach.

Preliminary Cost

Several manufacturers exist that can provide the ion exchange process equipment. This should provide a situation that keeps equipment costs competitive. Some manufacturers utilize proprietary configuration and/or equipment that will have to be accounted for during the design and bidding phases.

Capital costs for ion exchange treatment processes will include costs for:

- Site/location preparation;
- Ion exchange equipment;
- Building enclosure;
- Piping and appurtenances
- Electrical and controls;
- Monitoring equipment; and
- Resin regeneration waste handling facilities.

The capital cost for CPUD's ion exchange approach represents a centralized location that requires additional pipelines to bring the water to the treatment facility. OPUD's capital costs reflect the need to construct satellite facilities at designated wells. A significant contingency

exists since these approaches were developed without the completion of a detailed design. If an ion exchange process is selected, detailed design would result in more refined costs.

Two cost alternatives for groundwater treatment were developed. One cost alternative incorporates the construction of disposal ponds for the ion exchange regeneration product. This approach will require the identification, acquisition and development of an offsite location and associated delivery system. Table 5-1 summarizes the estimated capital cost to each district for this approach to nitrate removal. CPUD's cost is estimated to total approximately $6.51 million. The cost for a single well in OPUD is estimated to be approximately $7.8 million. Providing nitrate removal at remaining OPUD wells would increase OPUD's capital costs respectively (i.e., two wells will result in two times the capital cost). A significant portion of the capital cost for each district corresponds to the regeneration water disposal ponds. Larger ponds are necessary for OPUD due to larger regeneration volumes resulting from higher nitrate levels in the groundwater.

The second cost alternative for groundwater treatment is to contract with a waste hauler to transport and dispose of the ion exchange regeneration byproduct. Table 5-2 summarizes the estimated capital cost to each district if contractual waste hauling is implemented. The estimated cost to each district is significantly lower than the pond alternative. CPUD's cost is estimated to total approximately $3.46 million. OPUD's project cost is estimated to be approximately $2.65 million. This approach will, however, require annual operational considerations.

Annual costs are comprised of costs that will be incurred on a regular basis. The districts' ion exchange processes will have annual costs related to the following:

- Labor for operations and maintenance;

TABLE 5-1
PRELIMINARY COST ESTIMATE - GROUNDWATER TREATMENT WITH PONDS
WATER SUPPLY STUDY
CUTLER - OROSI AREA

ITEM	DETAILS		AMOUNT CPUD	AMOUNT OPUD (1)
1.	Site/Location Preparation		$ 81,250.00	$ 100,000.00
	Fencing, paving, etc			
2.	Ion Exchange Equipment			
	Modular, brine regeneration system		$ 325,000.00	$ 400,000.00
	Installation		$ 130,000.00	$ 160,000.00
	Electrical and Controls		$ 97,500.00	$ 120,000.00
3.	Water Treatment Plant Building		$ 400,000.00	$ 440,000.00
	Equipment enclosure			
4.	Piping and Appurtenances			
	Existing site piping modifications, new piping		$ 75,000.00	$ 75,000.00
	Water supply/delivery pipelines and connections		$ 580,000.00	$ -
5.	Electrical and Controls - other equipment, facilities		$ 100,000.00	$ 100,000.00
6.	Monitoring Equipment		$ 30,000.00	$ 30,000.00
	Nitrate analyzers			
7.	Regeneration Waste Recovery/Handling Facilities		$ 1,930,000.00	$ 3,100,000.00
	Off site locations, Lined evaporation ponds, piping			
	SUBTOTAL		$ 3,748,750.00	$ 4,525,000.00
	Contractor Profit, Bonds and Insurance at 10 %		$ 374,875.00	$ 452,500.00
	Contingency at 20 %		$ 749,750.00	$ 905,000.00
	Inflation at 10 %		$ 374,875.00	$ 452,500.00
	TOTAL CONSTRUCTION COST		$ 5,248,250.00	$ 6,335,000.00
	Engineering	7%	$ 367,400.00	$ 443,500.00
	CEQA, Permits, Preliminary Study	2%	$ 105,000.00	$ 126,700.00
	Legal/Administration	2%	$ 105,000.00	$ 126,700.00
	Inspection, Surveying, Testing	11%	$ 577,300.00	$ 696,900.00
	TOTAL PROJECT COST		$ 6,402,950.00	$ 7,728,800.00

Note:
1. Cost for one well. Additional well(s) will increase cost accordingly.

TABLE 5-2
PRELIMINARY COST ESTIMATE - GROUNDWATER TREATMENT WITH CONTRACT DISPOSAL
WATER SUPPLY STUDY
CUTLER - OROSI AREA

ITEM	DETAILS		AMOUNT CPUD	AMOUNT OPUD (1)
1.	Site/Location Preparation		$ 81,250.00	$ 100,000.00
	Fencing, paving, etc			
2.	Ion Exchange Equipment			
	Modular, brine regeneration system		$ 325,000.00	$ 400,000.00
	Installation		$ 130,000.00	$ 160,000.00
	Electrical and Controls		$ 97,500.00	$ 120,000.00
3.	Water Treatment Plant Building		$ 400,000.00	$ 440,000.00
	Equipment enclosure			
4.	Piping and Appurtenances			
	Existing site piping modifications, new piping		$ 75,000.00	$ 75,000.00
	Water supply/delivery pipelines and connections		$ 580,000.00	$ -
5.	Electrical and Controls - other equipment, facilities		$ 100,000.00	$ 100,000.00
6.	Monitoring Equipment		$ 30,000.00	$ 30,000.00
	Nitrate analyzers			
7.	Regeneration Waste Recovery/Handling Facilities		$ 175,000.00	$ 100,000.00
	Storage, pumps and piping			
	SUBTOTAL		$ 1,993,750.00	$ 1,525,000.00
	Contractor Profit, Bonds and Insurance at 10 %		$ 199,375.00	$ 152,500.00
	Contingency at 20 %		$ 398,750.00	$ 305,000.00
	Inflation at 10 %		$ 199,375.00	$ 152,500.00
	TOTAL CONSTRUCTION COST		$ 2,791,250.00	$ 2,135,000.00
	Engineering	7%	$ 195,400.00	$ 149,500.00
	CEQA, Permits, Preliminary Study	2%	$ 55,800.00	$ 42,700.00
	Legal/Administration	2%	$ 55,800.00	$ 42,700.00
	Inspection, Surveying, Testing	11%	$ 307,000.00	$ 234,900.00
	TOTAL PROJECT COST		$ 3,405,250.00	$ 2,604,800.00

Note:
1. Cost for one well. Additional well(s) will increase cost accordingly.

- Chemicals;
- Electrical cost for pumping and equipment; and
- Storage, handling and disposal of waste products.

Operations and maintenance costs consist of the costs associated with the districts' efforts to utilize the process. Costs associated with the storage, handling and disposal of the ion exchange process' waste products will vary depending on the method. Contract disposal of the ion exchange waste will have very routine costs. Evaporation ponds will have intermittent costs as ponds are cleaned and the residuals need disposal. The estimated annual costs to the districts for an ion exchange process are summarized in Tables 5-3 and 5-4.

Table 5-3 summarizes the projected annual operations and maintenance costs for CPUD. Brine and pumping costs represent the largest portions of the annual cost. The high annual cost represents a serious concern regarding ion exchange as a water supply alternative. Contractual disposal of the waste products is not feasible due to its extremely high cost.

Table 5-4 summarizes the projected annual operations and maintenance costs for OPUD. The brine costs represent the largest portion of the annual cost. This situation results from the frequent regeneration of the ion exchange media due to the high nitrate concentrations of OPUD's groundwater supply. As with CPUD, the high annual cost for OPUD's ion exchange alternative is a serious concern to the viability of this alternative. Contract disposal of the regeneration waste product is also not feasible for OPUD.

The total cost for groundwater treatment is summarized in Table 5-5. Table 5-5 provides the costs for each waste disposal alternative for each district. Since the water demand projections utilized a duration of twenty years , the present worth of each district's annual costs have also

TABLE 5-3
ANNUAL OPERATIONS AND MAINTANCE COST - GROUNDWATER TREATMENT FOR CPUD WATER SUPPLY STUDY
CUTLER-OROSI AREA

CUTLER PUBLIC UTILITY DISTRICT - 1,200 g.p.m. ion exchange system, single location.

COST CATEGORY	DESCRIPTION	AMOUNT	UNITS	UNIT COST ($/unit)	TOTAL COST	NOTES
LABOR						
	Routine operations	520	hrs/yr	$ 40.00	$ 20,800.00	Higher operational certification required.
	Regeneration monitorin;	416	hrs/yr	$ 40.00	$ 16,600.00	Higher operational certification required.
CHEMICALS AND MATERIALS						
	Brine Cost	2,500,000	lbs/yr	$ 0.05	$ 125,000.00	
	Chlorine	3,650	gal/yr	$ 0.75	$ 2,737.50	Liquid chlorine (hypochlorite) proposed.
	Resin Replacement	60	cf/yr	$ 150.00	$ 9,000.00	Resin replaced once every five years.
	Misc. Materials		Lump Sum		$ 20,510.63	
ELECTRICAL						
	Pumping	90	hp	$ 0.15	$ 88,200.00	Wells back on-line. 24 hour operation.
	Equipment	48	kW-hr/day	$ 0.15	$ 17,500.00	
	Misc. Power	6	kW-hr/day	$ 0.15	$ 2,200.00	
ANNUAL OPERATIONS AND MAINTENANCE COST					$ 302,548.13	Cost for onsite disposal of waste products.
	Additional Cost for Waste Disposal:					
	Transportation	18,500,000	gal/yr	$ 0.15	$ 2,775,000.00	Contractual disposal of waste products if on site disposal not utiltized.

TABLE 5-4
ANNUAL OPERATIONS AND MAINTANCE COST - GROUNDWATER TREATMENT FOR OPUD WATER SUPPLY STUDY
CUTLER-OROSI AREA

OROSI PUBLIC UTILITY DISTRICT - 400 g.p.m., single well site.

COST CATEGORY	DESCRIPTION	AMOUNT	UNITS	UNIT COST ($/unit)	TOTAL COST	NOTES
LABOR						
	Routine operations	260	hrs/yr	$ 40.00	$ 10,400.00	Higher operational certification required.
	Regeneration monitoring	416	hrs/yr	$ 40.00	$ 16,600.00	Higher operational certification required.
CHEMICALS AND MATERIALS						
	Brine Cost	9,900,000	lbs/yr	$ 0.05	$ 495,000.00	
	Chlorine	2,600	gal/yr	$ 0.75	$ 1,950.00	Liquid chlorine (hypochlorite) proposed.
	Resin Replacement	60	cf/yr	$ 150.00	$ 9,000.00	Resin replaced once every five years.
	Misc. Materials		Lump Sum		$ 75,892.50	
ELECTRICAL						
	Pumping	35	hp	$ 0.15	$ 34,300.00	Wells back on-line. 24 hour operation.
	Equipment	24	kW-hr/day	$ 0.15	$ 8,800.00	
	Misc. Power	3	kW-hr/day	$ 0.15	$ 1,100.00	
ANNUAL OPERATIONS AND MAINTENANCE COST					$ 653,042.50	Cost for onsite disposal of waste products.
	Additional Cost for Waste Disposal:					
	Transportation	34,500,000	gal/yr	$ 0.15	$ 5,175,000.00	Contractual disposal of waste products if on site disposal not utiltized.

TABLE 5-5
SUMMARY OF PRELIMINARY COST ANALYSES - GROUNDWATER TREATMENT
WATER SUPPLY STUDY
CUTLER-OROSI AREA

	CPUD		OPUD (one well)	
	with ponds	w/o ponds	with ponds	w/o ponds
PROJECT COST	$ 6,403,000	$ 3,405,300	$ 7,728,800	$ 2,604,800
ANNUAL OPERATIONS COST	$ 302,500	$ 3,077,500	$ 653,000	$ 5,828,000
Present Worth of Annual Cost 6 % interest; term of 20 years	$3,469,700	$35,298,700	$7,489,900	$66,846,700
TOTAL COST (per District)	$ 9,872,700	$ 38,704,000	$ 15,218,700	$ 69,451,500

	TOTAL CUTLER-OROSI AREA COST	
	with waste disposal ponds	utilizing contractual waste disposal
TOTAL CAPITAL COST	$14,131,800	$6,010,100
PRESENT WORTH OF ANNUAL COST	$10,959,600	$102,145,400
TOTAL COST TO CUTLER-OROSI AREA	$25,091,400	$108,155,500

been compiled. The present worth of the contractual disposal of work products further demonstrates the economic infeasibility of this approach for each district.

Subsequently, the most cost effective approach regarding ion exchange for groundwater treatment is to construct local disposal ponds. The total capital cost to provide groundwater treatment and meet the projected water needs is approximately $14.3 million. The overall present worth of this project is about $25.1 million.

SURFACE WATER TREATMENT

Based upon preliminary considerations regarding surface water treatment technologies and processes, membrane filtration followed by ultra-violet (UV) light disinfection presents the best approach.

Process Description

A typical process schematic for the surface water treatment system is shown on Figure 5-4. The primary elements of this approach are membrane filters and UV disinfection components. The membranes will consist of hollow membrane material with pore sizes between $1x10^{-4}$ and $1x10^{-6}$ meter in diameter. Water is forced through the pores. The membranes effectively remove Giardia cysts and cryptosporidium oocysts. Particulates are trapped on the membrane's surface until removed by backwashing.

The membrane process utilizes two backwash modes. The most frequently utilized mode is a standard backwash procedure where water and air are used to scour the surface of the membrane to clean the membrane surface. Periodically, the membrane process needs to undergo an in-place cleaning with weak chemical cleaning solutions. Due to the extent of equipment

functions, the membrane process generally operates automatically; manual operation, however, is possible.

After filtration, the treated water will be subjected to UV light to accomplish the necessary degree of disinfection. UV light is a very effective disinfectant. It does not, however, provide any disinfectant residual to be carried throughout the water distribution system. Since the districts utilize chlorine for disinfection of the groundwater, a chlorination system for the distribution system is also necessary.

Location

Several considerations exist regarding potential locations for the surface water treatment facility. Surface water sources in the vicinity are the Kings River and the Friant-Kern Canal. The Friant-Kern Canal represents the closest source; it is approximately 4 miles from Orosi. Irrigation canals bring Kings River water close to the Orosi and Cutler communities. These canals, however, experience local discharges that may significantly alter the water quality. A pipeline to bring Kings River water from Wahtoke Lake would be approximately 13 miles and therefore, cost prohibitive.

Conceptual Design

The surface water treatment approach consists of several components including:

- Intake structure and pump station;
- Transmission pipeline;
- Membrane treatment process;
- UV disinfection system;
- Chlorination system; and

- Treated water storage tank and pump station.

Preliminary design considerations are discussed below.

The Friant-Kern Canal (FKC) represents the closest source of surface water. The distance from the FKC to the districts ranges from 2 to 4 miles. A turnout structure at the FKC would consist of a wet well, vertical turbine pumps and fine mesh screens to prevent debris from entering the turnout structure and damaging the pumps. For 2 MGD, approximately 70 horsepower (hp) pumps and a 15-inch diameter pipeline will be necessary. Multiple pump and/or control arrangements are feasible to provide incremental water supply needs. Refined pumping arrangements can be developed during detailed design. Flow by gravity from the FKC may be possible which would reduce the project cost.

The design and configuration of surface water treatment elements of this approach is straightforward. A general site plan for the surface water facilities is shown on Figure 5-5. A detailed layout of this treatment components is shown on Figure 5-6.

Membrane filters processes are modular units that are packaged with the necessary components and controls. Several options exist regarding membrane process configurations depending on membrane pore size, flow and pressure orientation. Ultra-filtration membranes represent a smaller pore size than micro-filtration membranes and, therefore, a more stringent barrier. Ultra-filtration membranes should be utilized in the treatment process to provide a higher level of removal credit. Membrane systems are configured to operate under pressure or vacuum. Typically, membrane flow and pressure conditions are associated with manufacturer membrane designs which can be determined during detailed design.

Based upon water quality, the raw surface water can be fed directly to the membranes. To increase the capability of the membranes under more variable water conditions, pretreatment

elements of coagulation/flocculation and sedimentation can be considered.

Backwash water can be considered typical of residuals originating from conventional under treatment plants. Generally, backwash water has high concentrations of solids. Backwash water will be recovered in on-site ponds for evaporation and percolation. Due to chemical addition, the cleaned-in-place (CIP) backwash rinseate will be neutralized prior to disposal. It is proposed that small lined evaporation ponds be constructed to handle the neutralized CIP waste.

Several configurations exist for UV disinfection. Drinking water applications typically utilize closed-pipe systems that tie directly into treated water piping. UV lamps are positioned inside special pipe fittings. The number of lamps to accomplish disinfection will be established by the treated water quality.

A chlorination system will be necessary to provide a disinfectant residual in the distribution system. Based upon a chlorine dose of 2 mg/l, approximately 33 pounds of chlorine will be required daily to treat 2 MGD. Approximately 1,000 pounds of chlorine is needed to provide 30 days supply. A gaseous chlorine system is recommended due to the significant volume of liquid chlorine (hypochlorite) necessary to provide an equivalent amount of chlorine. Risk management issues can be anticipated and addressed during detail design.

Preliminary Cost

The capital cost to provide a surface water treatment approach will consist of the following costs:

- intake structure and pump station;
- transmission pipeline;
- site/location preparation;

- membrane treatment process;
- UV disinfection process;
- chlorination system;
- building;
- water storage tank and pump stations;
- membrane residual recovery ponds;
- standby generator; and
- delivery system/distribution system piping.

Most, if not all, of the components of surface water treatment plan are represented by multiple manufacturers. Several manufacturers exist for the membrane process and UV disinfection equipment which should provide a cost-competitive situation. These processes, however, can include proprietary features that will need to be addressed during detailed design and project bidding.

Table 5-6 summaries the estimated capital cost for surface water treatment. The project cost is estimated to be approximately $17.4 million.

A surface water treatment plant presents several annual (recurring) cost considerations. Annual operations and maintenance costs will be associated with the following:

- labor;
- chemicals and materials; and
- electrical costs for treatment processes and pumping.

Since the districts do not own surface water rights, the water supply for the facility will need to be purchased. This cost of water represents an additional annual cost.

TABLE 5-6
PRELIMINARY COST ESTIMATE - SURFACE WATER TREATMENT
WATER SUPPLY STUDY
CUTLER - OROSI AREA

ITEM	DETAILS		AMOUNT
1.	Intake Structure and Pump Station		$ 280,000.00
	Pumps, Screens, Structure, Modifications		
2.	Transmission Pipeline		$ 1,500,000.00
	15-inch diameter, 4 miles long		
3.	Water Treatment Plant Site		
	Land Purchase - 10 acres		$ 200,000.00
	Sitework; preparation (fencing, paving, etc.)		$ 350,000.00
4.	Membrane Treatment Process		
	2 MGD, modular, clean in place process		$ 1,300,000.00
	Installation		$ 520,000.00
	Electrical and Controls		$ 400,000.00
5.	UV Disinfection System		
	2 MGD		$ 250,000.00
	Installation		$ 100,000.00
	Electrical and Controls		$ 75,000.00
6.	Chlorination System - For Distribution System		$ 100,000.00
	Additional chemical processes, treatment appurtenances		
7.	Water Treatment Plant Building		$ 720,000.00
	Equipment enclosure, lab area		
8.	Treated Water Storage Tank and Pump Station		$ 3,000,000.00
9.	Backwash Recovery Ponds		
	Ponds - (2) one acre ponds, (2) 2,200 sf ponds, piping		$ 125,000.00
10.	Standby Generator and Automatic Transfer Switch		$ 100,000.00
11.	Distribution System Piping		$ 1,000,000.00
	SUBTOTAL		$ 10,020,000.00
	Contractor Profit, Bonds and Insurance at 10 %		$ 1,002,000.00
	Contingency at 20 %		$ 2,004,000.00
	Inflation at 10 %		$ 1,002,000.00
	TOTAL CONSTRUCTION COST		$ 14,028,000.00
	Engineering	7%	$ 982,000.00
	CEQA, Permits, Preliminary Study	2%	$ 280,600.00
	Legal/Administration	2%	$ 280,600.00
	Inspection, Surveying, Testing	11%	$ 1,543,100.00
	TOTAL PROJECT COST		$ 17,114,300.00

Table 5-7 summarizes the anticipated annual costs for surface water treatment. Purchasing the new water represents the largest cost due to its local importance and availability. Electrical costs represents the single largest operational cost consideration, primarily due to pumping requirements.

The total cost for surface water treatment is summarized in Table 5-8. Table 5-8 also provides each districts' cost share proportioned according to each districts' water demands. Table 5-8 also presents the present worth of the annual costs over a project duration of 20 years. The total present worth of this potential project is about $22.8 million.

COMPARISON

Ion exchange for groundwater treatment and membrane filtration for surface water treatment represent two very different approaches to address projected water needs in the Cutler - Orosi area. Common considerations exist to each water supply approach. Each treatment approach will require an increased level of operator certification due to the advanced levels of the treatment processes. Also, most of the treatment components are modular which will facilitate faster construction and incremental treatment capacities if desired.

Table 5-9 summarizes the advantages and disadvantages to each approach. Table 5-10 provides a comparison of the potential project costs for each treatment approach.

Groundwater treatment presents the lowest capital cost which results from having existing well sites and fewer disinfection process requirements. A suitable site for surface water treatment facility has not been established. Locations for ion exchange waste disposal ponds, however, also need to be identified.

TABLE 5-7
ANNUAL OPERATIONS AND MAINTANCE COST - SURFACE WATER TREATMENT PLANT
WATER SUPPLY STUDY
CUTLER-OROSI AREA

COST CATEGORY	DESCRIPTION	AMOUNT	UNITS	UNIT COST ($/unit)	TOTAL COST	NOTES
LABOR						
	Routine operations	1,040	hrs/yr	$ 40.00	$ 41,600.00	Higher operational certification required.
	CIP monitoring	416	hrs/yr	$ 40.00	$ 16,600.00	Higher operational certification required.
CHEMICALS AND MATERIALS						
	CIP Process					
	Citric Acid	4,200	lbs/yr	$ 0.50	$ 2,100.00	Acid wash step
	Sodium Hydroxide	1,100	lbs/yr	$ 0.85	$ 935.00	Caustic clean step, acid neutralization.
	Hydrochloric Acid	800	lbs/yr	$ 0.20	$ 160.00	Caustic neutralization.
	Sodium Hypochlorite	2,900	lbs/yr	$ 0.75	$ 2,175.00	Chlorination cleaning, includes amount for dechlorination.
	Chlorine - Disinfection	12,200	lbs/yr	$ 0.75	$ 9,150.00	Gas chlorine proposed due to quantities.
	Misc. Materials		Lump Sum		$ 2,200.00	
ELECTRICAL						
	Pumping - Supply	70	hp	$ 0.15	$ 68,600.00	Supply to WTP. 24 hour operation.
	Backwash Process	25,000	kW-hr/yr	$ 0.15	$ 3,750.00	
	CIP Process	3,800	kW-hr/yr	$ 0.15	$ 570.00	One CIP per unit, per month.
	UV Disinfection	130,000	kW-hr/yr	$ 0.15	$ 19,500.00	24 hour operation.
	Misc. Equipment Power	8,000	kW-hr/yr	$ 0.15	$ 1,200.00	
	Pumping - Delivery	40	hp	$ 0.15	$ 39,200.00	
ANNUAL OPERATIONS AND MAINTENANCE COST					$ 207,740.00	Cost for onsite disposal of waste products.
	Annual Cost of Water	2,300	ac-ft/yr	$ 120.00	$ 276,000.00	
TOTAL ANNUAL COST					$ 483,740.00	

TABLE 5-8
SUMMARY OF PRELIMINARY COST ANALYSES - SURFACE WATER TREATMENT
WATER SUPPLY STUDY
CUTLER-OROSI AREA

	TOTAL COST	DISTRICT SHARE (1)	
		CPUD 70%	OPUD 30%
PROJECT COST	$ 17,114,300	$ 11,980,010	$ 5,134,290
ANNUAL OPERATIONS COST	$ 483,740	$ 338,618	$ 145,122
Present Worth of Annual Cost 6 % interest; term of 20 years	$ 5,548,500	$ 3,883,950	$ 1,664,550
TOTAL COST	$ 22,662,800	$ 15,863,960	$ 6,798,840

Note:

1. Based upon 2 MGD total flow; 1.4 MGD - CPUD, 0.6 MGD - OPUD.

TABLE 5-9
SUMMARY OF ADVANTAGE AND DISADVANTAGES
WATER SUPPLY STUDY
CUTLER-OROSI AREA

ALTERNATIVE	ADVANTAGES	DISADVANTAGES
Groundwater Treatment	Lowest capital cost	Highest overall cost
	Nitrate removal recaptures existing water supply	Highest annual operations and maintenance costs
	Modular components streamline installation schedule	Multiple locations necessary
		Waste disposal locations needed; unable to site with ion exchange equipment
		Well sites may affect ion exchange configuration
		Increased level of operator certification required
		Variable water quality in area may affect other wells
Surface water treatment	Lowest overall cost	Highest capital cost
	Lowest annual operations maintenance costs	No existing rights to surface water supply
	Single location needed; fewer operators/hours necessary	Final location not yet identified
	Provides reliable water supply	Risk management requirements for gaseous chlorine system
	Modular components can support phased implementation	Increased level of operator certification required
	Reduces need for groundwater pumping and subsequent overdraft conditions.	Increased regulatory requirements
	Minimal water quality concerns	

TABLE 5-10
COMPARISON OF PRELIMINARY COST ANALYSES
WATER SUPPLY STUDY
CUTLER-OROSI AREA

		GW TREATMENT TOTAL COST		SW TREATMENT TOTAL COST
PROJECT COST	$	14,131,800	$	17,114,300
ANNUAL OPERATIONS COST	$	955,500	$	483,740
Present Worth of Annual Cost 6 % interest; term of 20 years	$	10,959,600	$	5,548,500
TOTAL COST	$	25,091,400	$	22,662,800

The primary advantage to groundwater treatment is that this approach represents the lowest capital cost. Lower costs result from utilizing available well sites and small capacity disinfection systems. Groundwater treatment recaptures existing nitrate laden groundwater supplies. Finally, ion exchange processes are modular packaged units which would streamline implementation.

Groundwater treatment, however, presents several significant disadvantages. This approach result in the highest annual operations and maintenance costs due to chemical (brine) costs associated with resin regeneration. Additional man-hours are also required to monitor multiple locations. Disposal of the ion exchange regeneration by-products will require separate, offsite disposal facilities. Suitable locations for the necessary evaporation ponds have not been identified and may be a considerable distance from the well sites. Finally, nitrate levels in the groundwater have increased and have shown a significant amount of variability in the Cutler - Orosi area. Operational costs will increase as a result of continued increase in nitrate levels and subsequent treatment of the groundwater. Additional wells in the area may also be lost in the future to high nitrate levels, resulting in an additional water quantity that will require nitrate removal. Finally, other contaminants, such as DBCP will require additional treatment processes for removal.

Utilizing surface water provides several advantages to the Cutler - Orosi area. This approach represents the lowest overall cost over the 20-year water demand projection. Although surface water treatment has a high initial cost, the annual operations and maintenance costs are significantly lower than those for groundwater treatment. Lower annual costs result from man-hours necessary for a single treatment facility and lower chemical costs. An additional advantage

is that surface water is a reliable water source, if sufficient water rights are obtained. There are no known water quality concerns with the surface waters available to the region. Some water quality variation may be experienced due to storm water runoff. Finally, utilizing surface water reduces the area's use and dependence on the existing groundwater ,subsequently resulting in a reduction in groundwater overdraft conditions.

The most significant disadvantages to surface water treatment are the lack of existing surface water rights and location of the treatment facilities. First, the districts do not presently own any permanent or temporary rights to any quantity of surface water. Permanent rights would be required to ensure a reliable water supply. Purchasing the water for treatment represents over half of the estimated annual costs of the surface water approach. Second, a suitable location for the surface water treatment facilities has not been identified or established. Ideal locations exist, however, the availability of such locations has not been pursued.

An additional disadvantage to surface water treatment is the increased regulatory requirements associated with drinking water treatment. Increase treatment requirements, however, are addressed through the use of the membrane and UV disinfection systems. Chemical handling requirements associated with chlorination can be addressed through risk management plan measures.

CONCLUSION

If a surface water supply can be identified and secured by the districts, the surface water treatment approach represents the most economical and beneficial project. The conclusion is based upon the following:

- lowest total potential project cost;
- lowest estimate annual operations and maintenance cost;
- modular components allowed for phased implementation;
- single location;
- consistent water quality; and
- provides regional groundwater benefits.

The acquisition of surface water represents a significant issue to using surface water treatment to meet the projected water needs. The Friant-Kern Canal represents the closest surface water source for the districts. The Friant-Kern Canal is taken out of service every three years, however, which may require the use of Alta Irrigation District's (AID) water delivery canals. Since AID's canals travel through more developed areas, including the Cutler-Orosi area and receive storm water flow, increased water quality monitoring may be required.

The remaining disadvantages/obstacles to the surface water treatment approach can be addressed through detailed planning and design considerations.

Funding sources and programs have not been identified. Table 5-11 summarizes various funding scenarios for the surface water treatment approach. The funding scenarios represent common conditions of various funding programs. The funding terms directly impact the costs to the districts and their respective customers.

Table 5-11 also presents each district's respective share of overall project costs based upon water demands. CPUD's cost share is significantly greater than OPUD's cost share due to its greater water demand from the project facilities.

TABLE 5-11
FUNDING SCENARIOS - PROPORTIONAL COST SHARE PER DISTRICT (1)
WATER SUPPLY STUDY
CUTLER-OROSI AREA

AMOUNTS	SCENARIO					
	50% Grant / 50% Loan		75% Grant / 25% Loan		75% Grant / 25% Loan	
	Conditions	Amount	Conditions	Amount	Conditions	Amount
Project Cost (2)		$ 17,114,300.00		$ 17,114,300.00		$ 17,114,300.00
Grant Amount	50%	$ 8,557,150.00	75%	$ 12,835,725.00	75%	$ 12,835,725.00
Loan Amount	50%	$ 8,557,150.00	25%	$ 4,278,575.00	25%	$ 4,278,575.00
Annual Repayment Amount (rounded)		$ 465,000.00		$ 232,500.00		$ 171,100.00
Payment term (years)	40		40		25	
Interest Rate	4.50%		4.50%		0.00%	
Required Reserve Amount (Percent)	10%	$ 46,500.00	10%	$ 23,250.00	10%	$ 17,110.00
TOTAL ANNUAL REPAYMENT AMOUNT		$ 511,500.00		$ 255,750.00		$ 188,210.00
Total Monthly Amount		$ 42,625.00		$ 21,312.50		$ 15,684.17
Cutler Public Utility District	70%	$ 29,837.50		$ 14,918.75		$ 10,978.92
Cost Per Connection	1,102	$ 27.08		$ 13.54		$ 9.96
Orosi Public Utility District	30%	$ 12,787.50		$ 6,393.75		$ 4,705.25
Cost Per Connection	1,645	$ 7.77		$ 3.89		$ 2.86

Note:
(1) District share based upon water demand. Reference Table 3-5.
(2) Surface water treatment approach. See Table 5-6 for cost development.

As an alternative to funding the project cost according to each district's water demand, the potential project could be funded equally between the districts. This funding alternative is presented in Table 5-12. This approach would result in additional capacity for OPUD in the surface water treatment plant and subsequent reduce CPUD's share in the surface water treatment plant. CPUD's firm water supply would be reduced by utilizing this approach. Additional water capacity would need to be purchased from OPUD when needed by CPUD to meet projected water demands.

TABLE 5-12
FUNDING SCENARIOS - EQUAL COST SHARE PER DISTRICT (1)
WATER SUPPLY STUDY
CUTLER-OROSI AREA

AMOUNTS	SCENARIO					
	50% Grant / 50% Loan		75% Grant / 25% Loan		75% Grant / 25% Loan	
	Conditions	Amount	Conditions	Amount	Conditions	Amount
Project Cost (2)		$ 17,114,300.00		$ 17,114,300.00		$ 17,114,300.00
Grant Amount	50%	$ 8,557,150.00	75%	$ 12,835,725.00	75%	$ 12,835,725.00
Loan Amount	50%	$ 8,557,150.00	25%	$ 4,278,575.00	25%	$ 4,278,575.00
Annual Repayment Amount (rounded)		$ 465,000.00		$ 232,500.00		$ 171,100.00
Payment term (years)	40		40		25	
Interest Rate	4.50%		4.50%		0.00%	
Required Reserve Amount (Percent)	10%	$ 46,500.00	10%	$ 23,250.00	10%	$ 17,110.00
TOTAL ANNUAL REPAYMENT AMOUNT		$ 511,500.00		$ 255,750.00		$ 188,210.00
Total Monthly Amount		$ 42,625.00		$ 21,312.50		$ 15,684.17
Cutler Public Utility District	50%	$ 21,312.50		$ 10,656.25		$ 7,842.08
Cost Per Connection	1,102	$ 19.34		$ 9.67		$ 7.12
Orosi Public Utility District	50%	$ 21,312.50		$ 10,656.25		$ 7,842.08
Cost Per Connection	1,645	$ 12.96		$ 6.48		$ 4.77

Note:
(1) Project cost divided equal between district without consideration of actual water demand.
(2) Surface water treatment approach. See Table 5-6 for cost development.

TABLE 5-13
TOTAL MONTHLY COST PER CONNECTION - PROPORTIONAL COST SHARE PER DISTRICT (1)
WATER SUPPLY STUDY
CUTLER-OROSI AREA

AMOUNTS (2)	SCENARIO					
	50% Grant / 50% Loan		75% Grant / 25% Loan		75% Grant / 25% Loan	
	Conditions	Amount	Conditions	Amount	Conditions	Amount
Total Annual Debt Service Cost (3)		$ 511,500.00		$ 255,750.00		$ 188,210.00
Total Annual Operations and Maintenance Cost (4)		$ 483,740.00		$ 483,740.00		$ 483,740.00
Total Annual Cost		$ 995,240.00		$ 739,490.00		$ 671,950.00
Total Monthly Amount		$ 82,936.67		$ 61,624.17		$ 55,995.83
Cutler Public Utility District	70%	$ 58,055.67	70%	$ 43,136.92	70%	$ 39,197.08
Cost Per Connection	1,102	$ 52.68	1,102	$ 39.14	1,102	$ 35.57
Debt Service		$ 27.08		$ 13.54		$ 9.96
O&M		$ 25.61		$ 25.61		$ 25.61
Orosi Public Utility District	30%	$ 24,881.00	30%	$ 18,487.25	30%	$ 16,798.75
Cost Per Connection	1,645	$ 15.13	1,645	$ 11.24	1,645	$ 10.21
Debt Service		$ 7.77		$ 3.89		$ 2.86
O&M		$ 7.35		$ 7.35		$ 7.35

Note:
(1) District share based upon water demand. Reference Table 3-5.
(2) Surface water treatment approach.
(3) See Table 5-11 for cost development.
(4) O&M cost reflects surface water treatment approach only. See Table 5-7 for development.
Does not include existing O&M cost for groundwater well operation.

TABLE 5-14
TOTAL MONTHLY COST PER CONNECTION - PROPORTIONAL COST SHARE PER DISTRICT (1)
WATER SUPPLY STUDY
CUTLER-OROSI AREA

AMOUNTS (2)	SCENARIO					
	50% Grant / 50% Loan		75% Grant / 25% Loan		75% Grant / 25% Loan	
	Conditions	Amount	Conditions	Amount	Conditions	Amount
Total Annual Debt Service Cost (3)		$ 511,500.00		$ 255,750.00		$ 188,210.00
Total Annual Operations and Maintenance Cost (4)		$ 483,740.00		$ 483,740.00		$ 483,740.00
Total Annual Cost		$ 995,240.00		$ 739,490.00		$ 671,950.00
Total Monthly Amount		$ 82,936.67		$ 61,624.17		$ 55,995.83
Cutler Public Utility District	50%	$ 41,468.33	50%	$ 30,812.08	50%	$ 27,997.92
Cost Per Connection	1,102	$ 37.63	1,102	$ 27.96	1,102	$ 25.41
Debt Service		$ 19.34		$ 9.67		$ 7.12
O&M		$ 18.29		$ 18.29		$ 18.29
Orosi Public Utility District	50%	$ 41,468.33	50%	$ 30,812.08	50%	$ 27,997.92
Cost Per Connection	1,645	$ 25.21	1,645	$ 18.73	1,645	$ 17.02
Debt Service		$ 12.96		$ 6.48		$ 4.77
O&M		$ 12.25		$ 12.25		$ 12.25

Note:
(1) District share based upon water demand. Reference Table 3-5.
(2) Surface water treatment approach.
(3) See Table 5-12 for cost development.
(4) O&M cost reflects surface water treatment approach only. See Table 5-7 for development.
Does not include existing O&M cost for groundwater well operation.

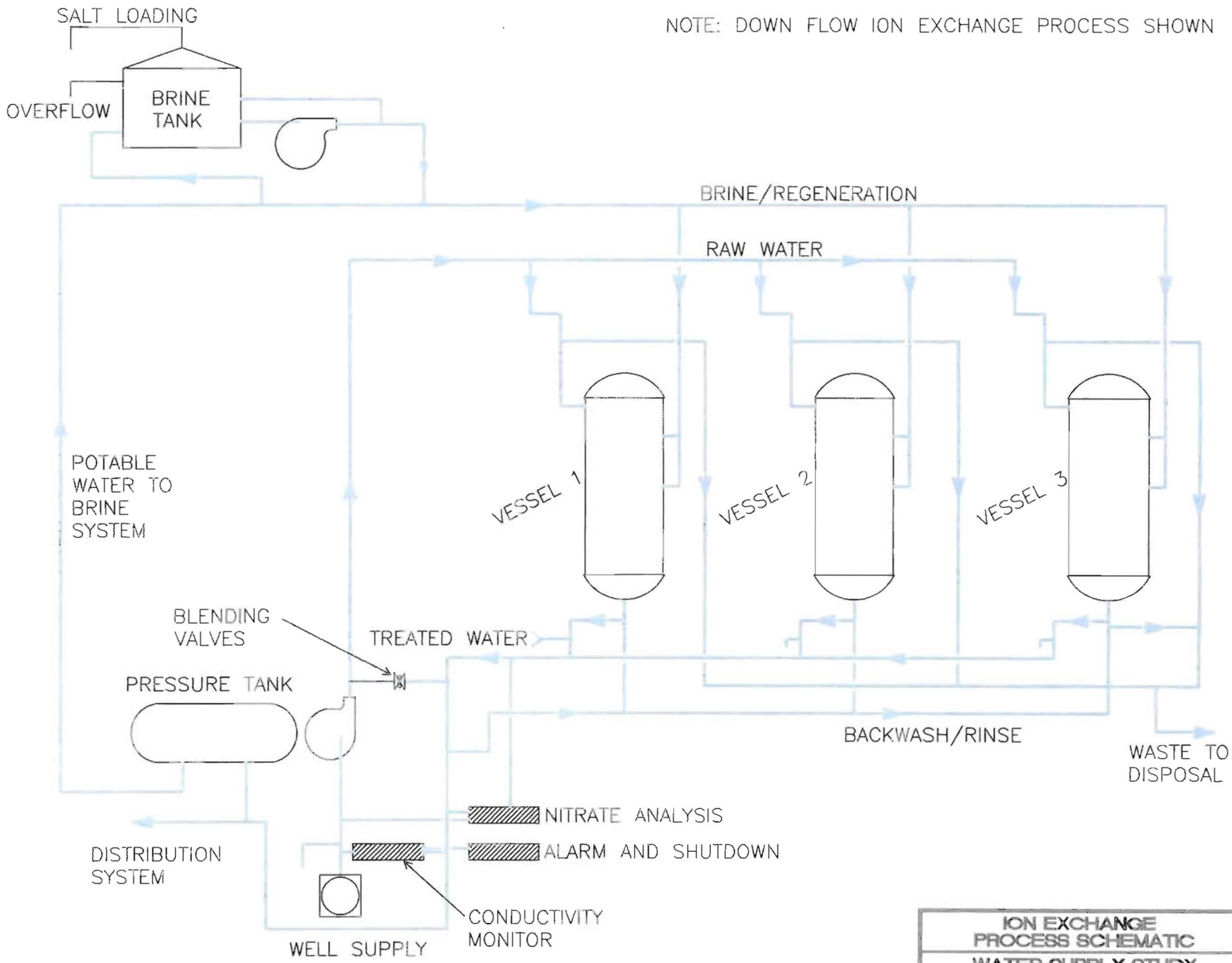
TABLE
PROJECTED WATER CONNECTION FEES
WATER SUPPLY STUDY
CUTLER-OROSI AREA

Total Project Cost $ 17,114,300.00

	CPUD	OPUD
Scenario	70%	30%
Water Capacity (MGD)	1.40	0.60
Water Use (gpcd)	205	150
Population Served by Water Capacity (persons)	6,829	2,927
Population per Existing Connection (1)	4.4	5.5
Available Connections	1,552	532
Total Project Cost Share	$ 11,980,010.00	$ 5,134,290.00
Cost per Connection (Connection Fee)	$ 7,718.55	$ 9,648.19

Note:
1. Based upon the number of connections and estimated 2007 population

	CPUD	OPUD
Number of Connections	1102	1645
Estimated Population	4815	9000
Population per Connection	4.4	5.5



Source: National Drinking Water Clearinghouse Ion Exchange and Demineralization fact sheet.

ION EXCHANGE PROCESS SCHEMATIC
WATER SUPPLY STUDY
CUTLER-OROSI AREA

KELLER/WEGLEY

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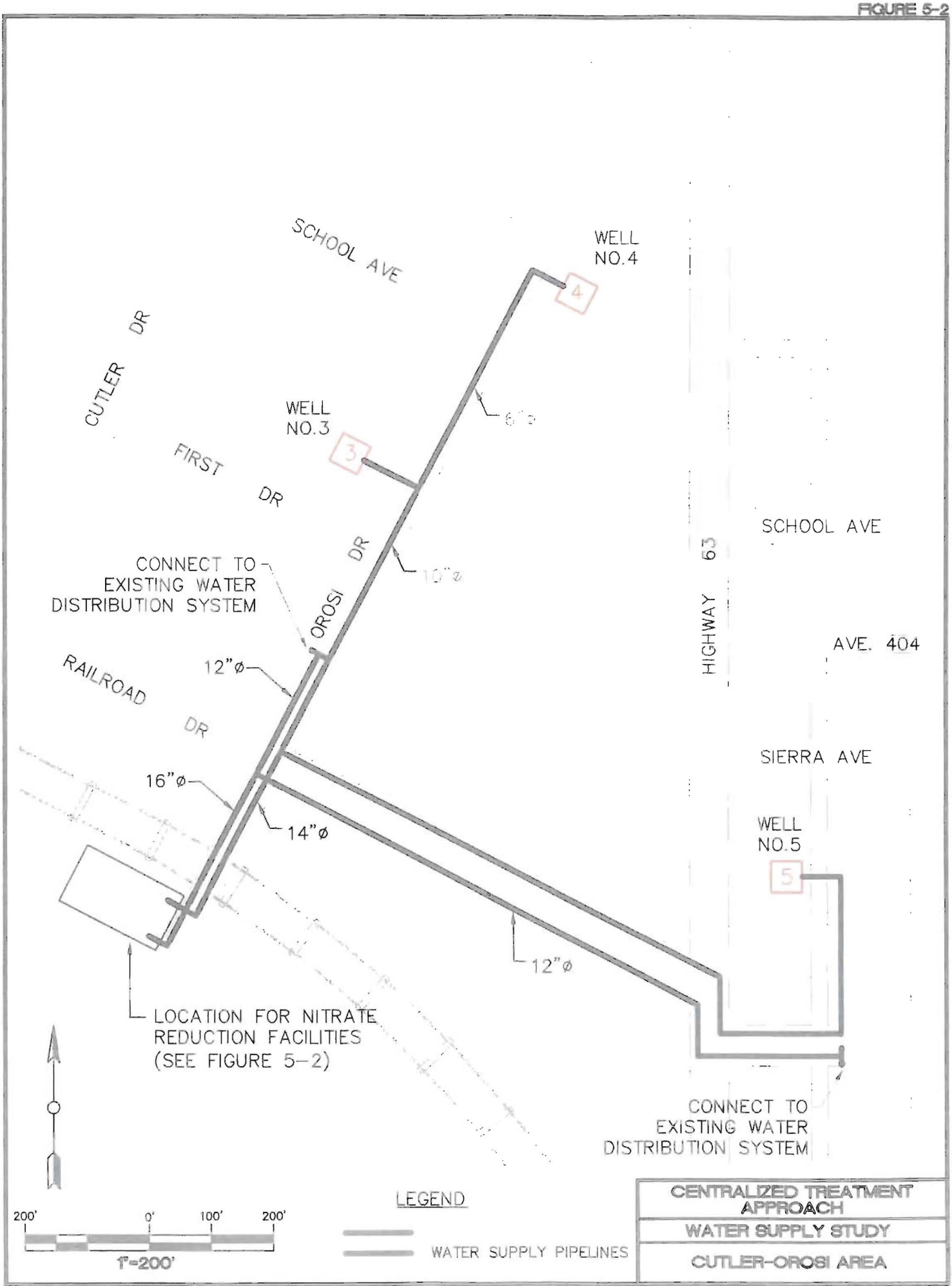
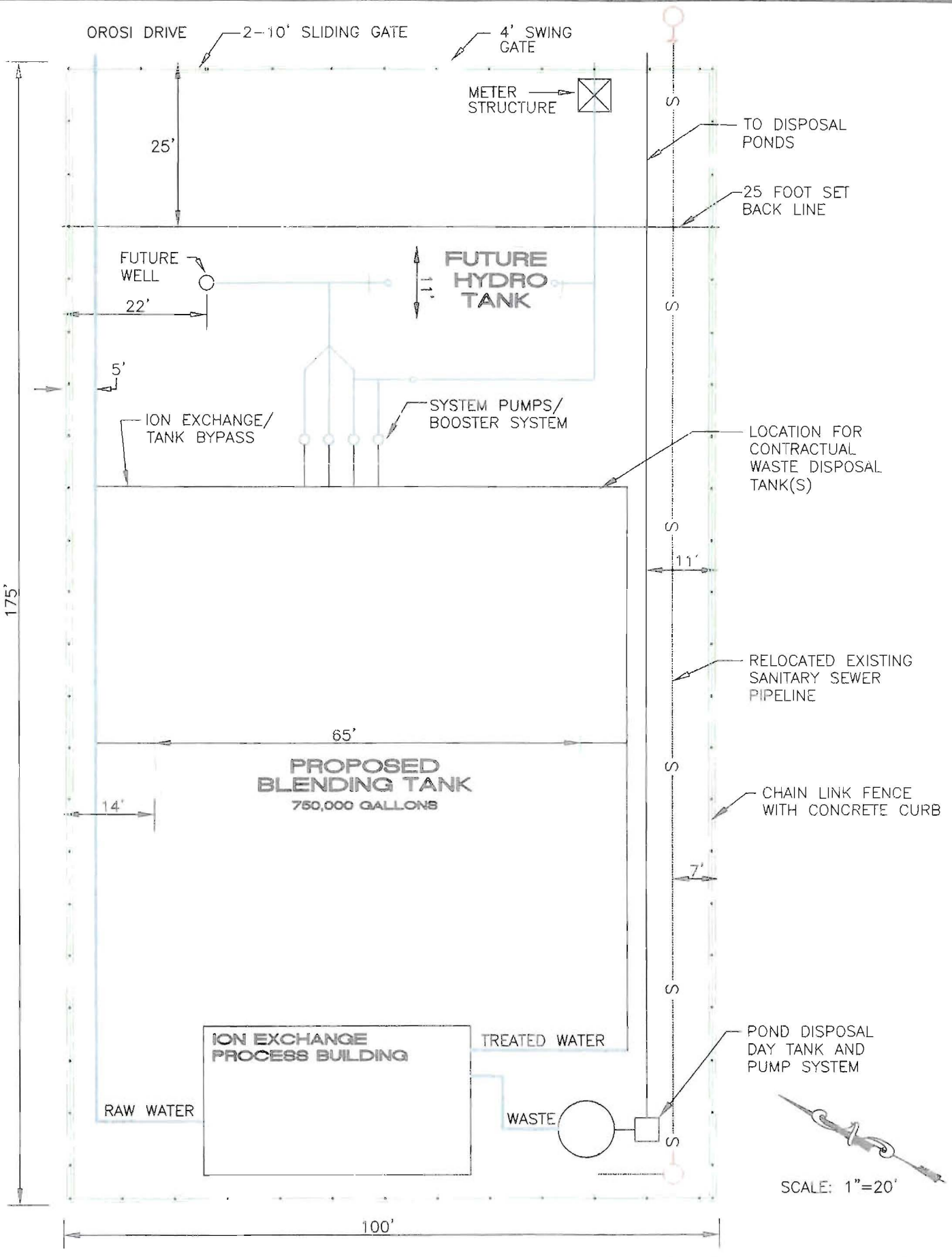
FIGURE 5-2



CENTRALIZED TREATMENT APPROACH
WATER SUPPLY STUDY
CUTLER-OROSI AREA

KELLER/WEGLEY

FIGURE 5-3



CPUD ION EXCHANGE LOCATION
WATER SUPPLY STUDY
CUTLER-OROSI AREA

KELLER/WEGLEY

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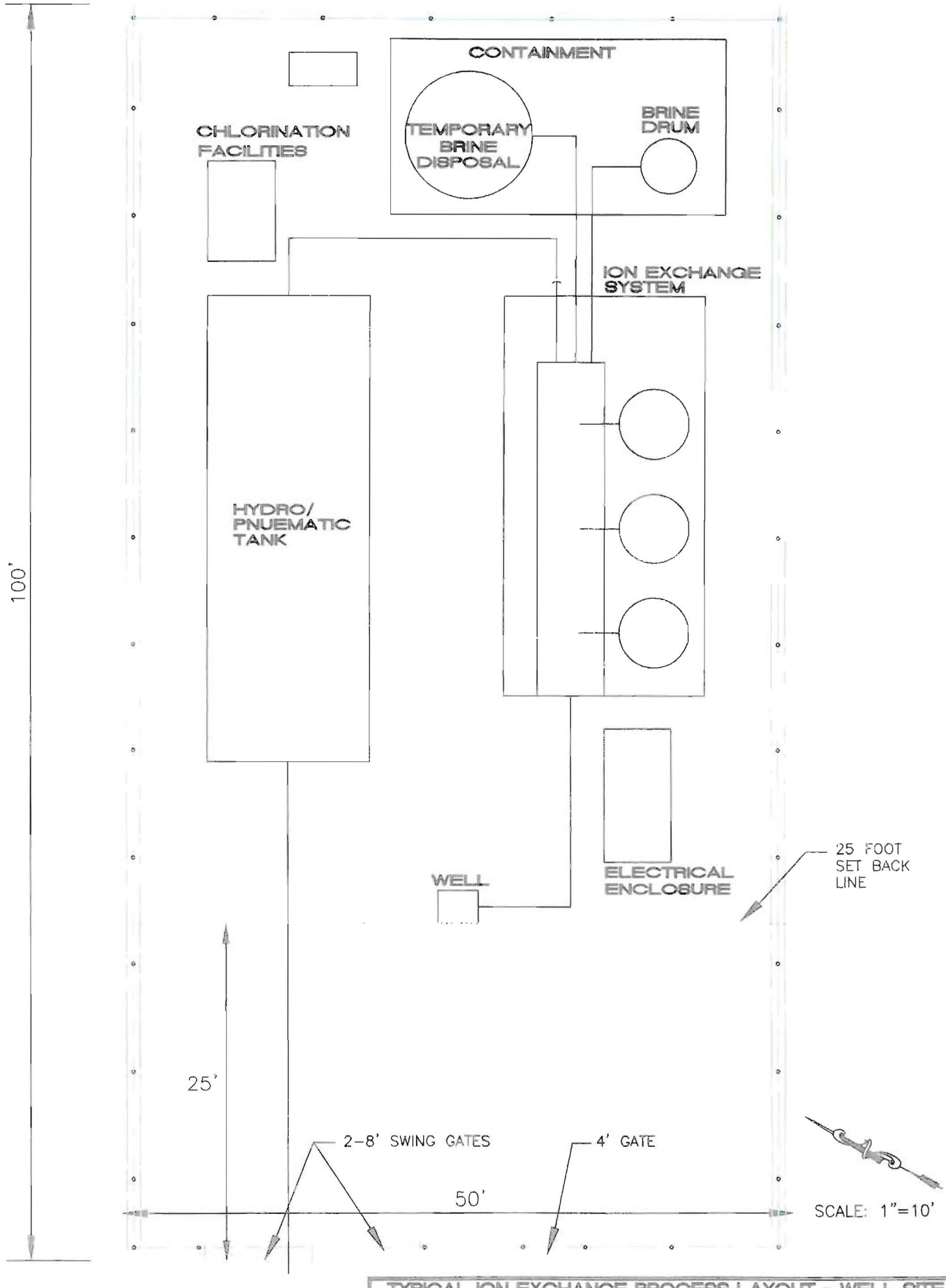

TYPICAL ION EXCHANGE PROCESS LAYOUT - WELL SITE
WATER SUPPLY STUDY
CUTLER-OROSI AREA

KELLER/WEGLEY

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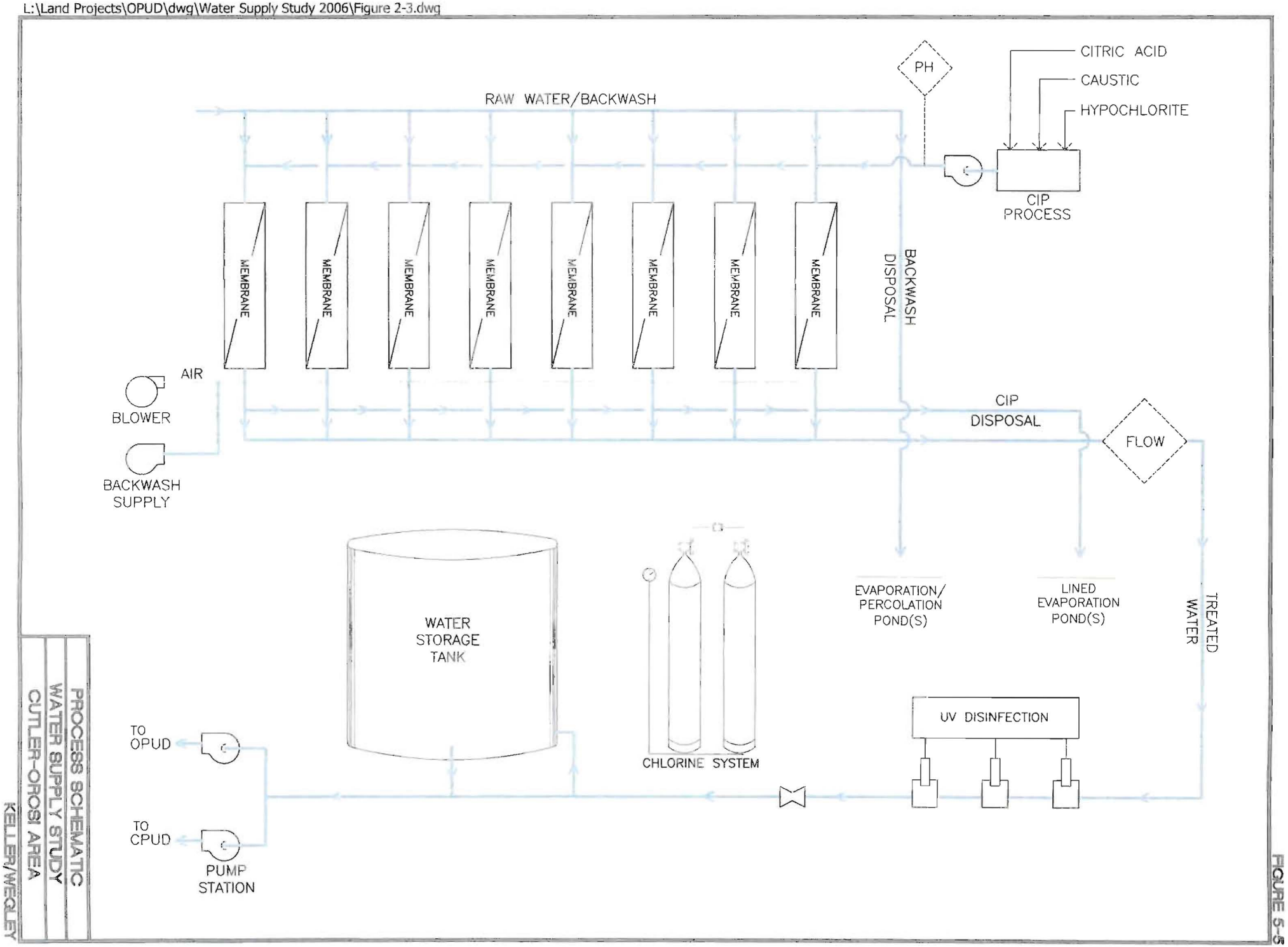
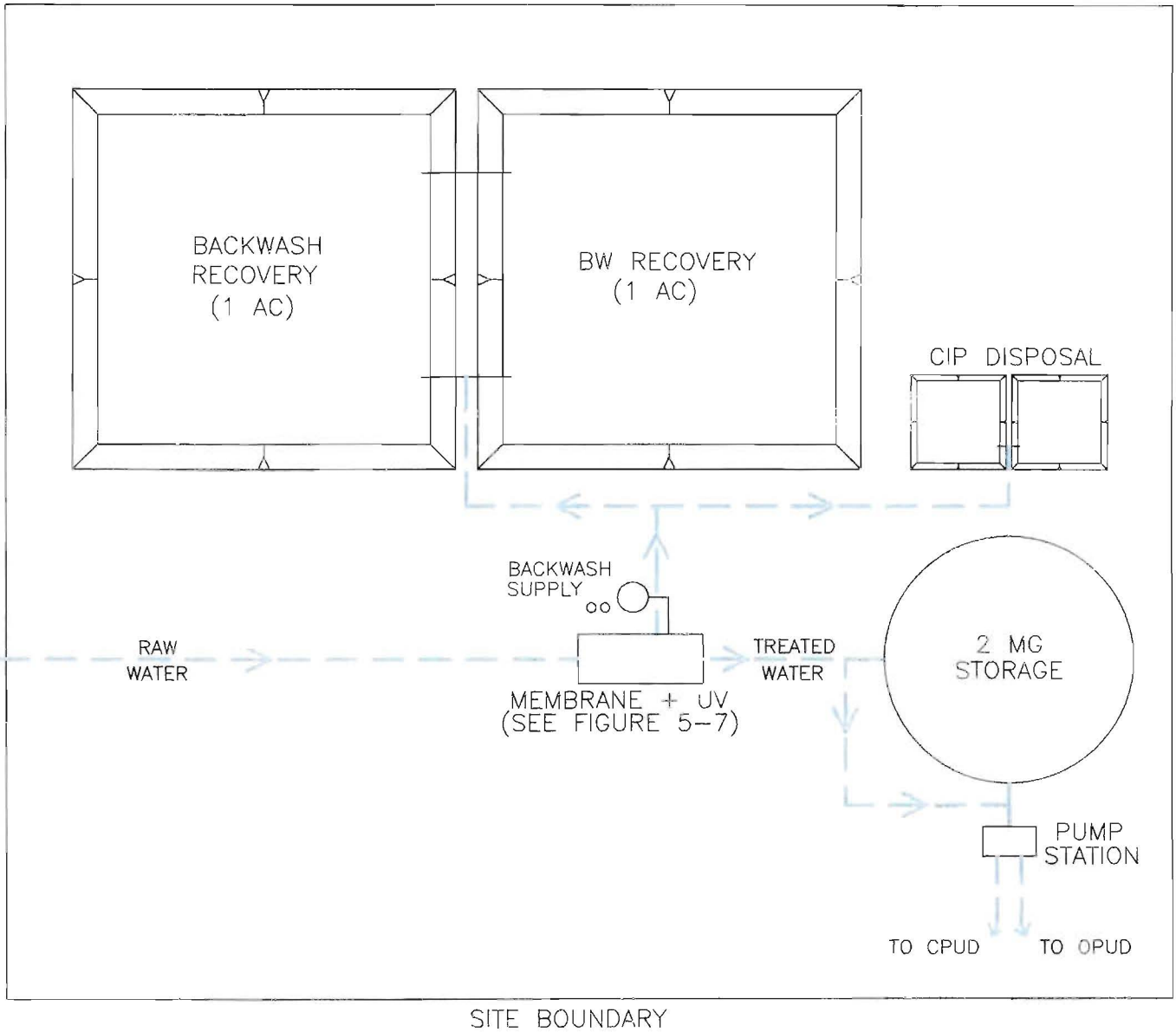


PROCESS SCHEMATIC
WATER SUPPLY STUDY
CUTLER-OROSI AREA

KELLER/WEGLEY

FIGURE 5-5



SCALE: 1"=100'

GENERAL SITE PLAN
WATER SUPPLY STUDY
CUTLER-OROSI AREA

KELLER/WEGLEY

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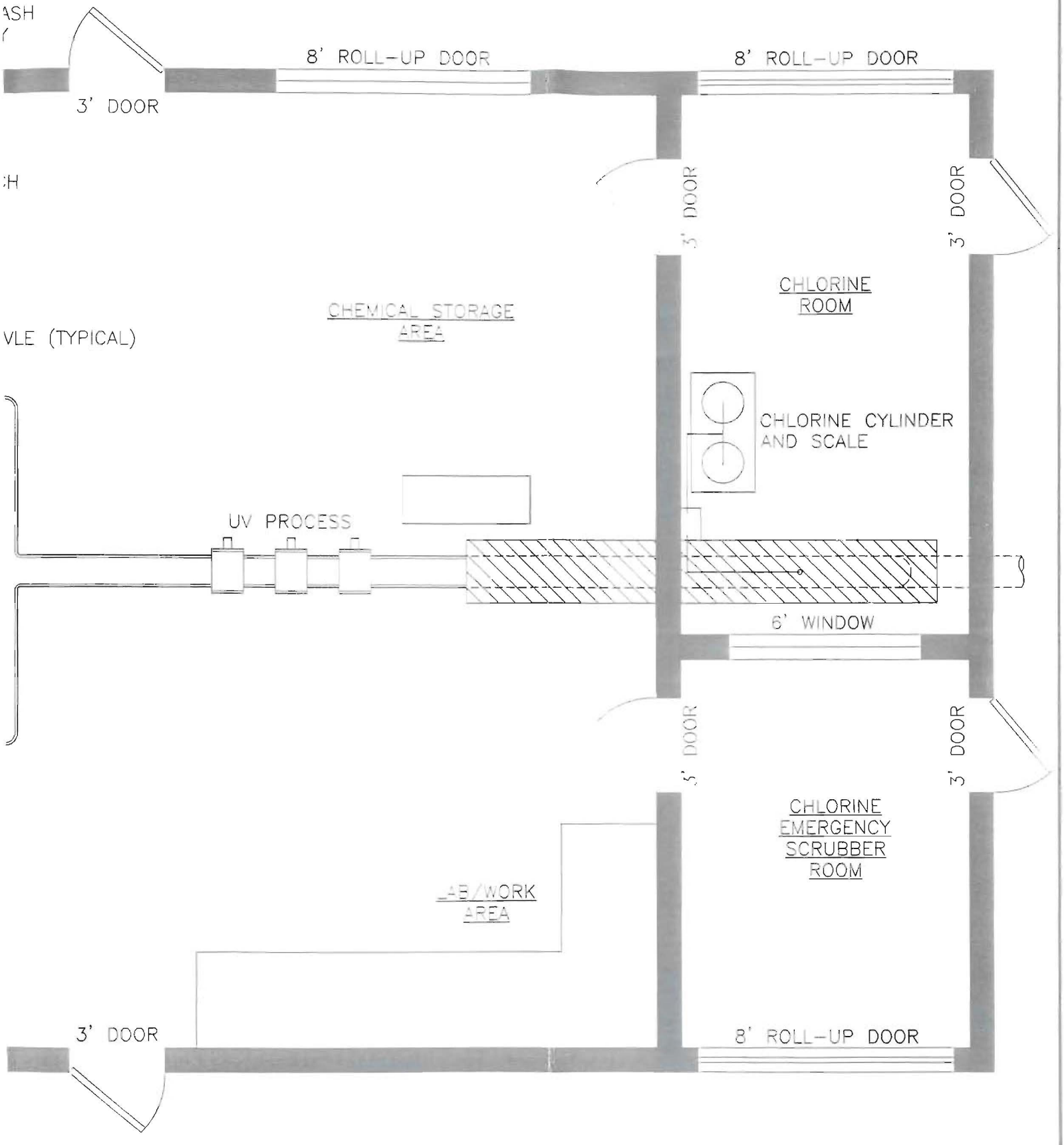
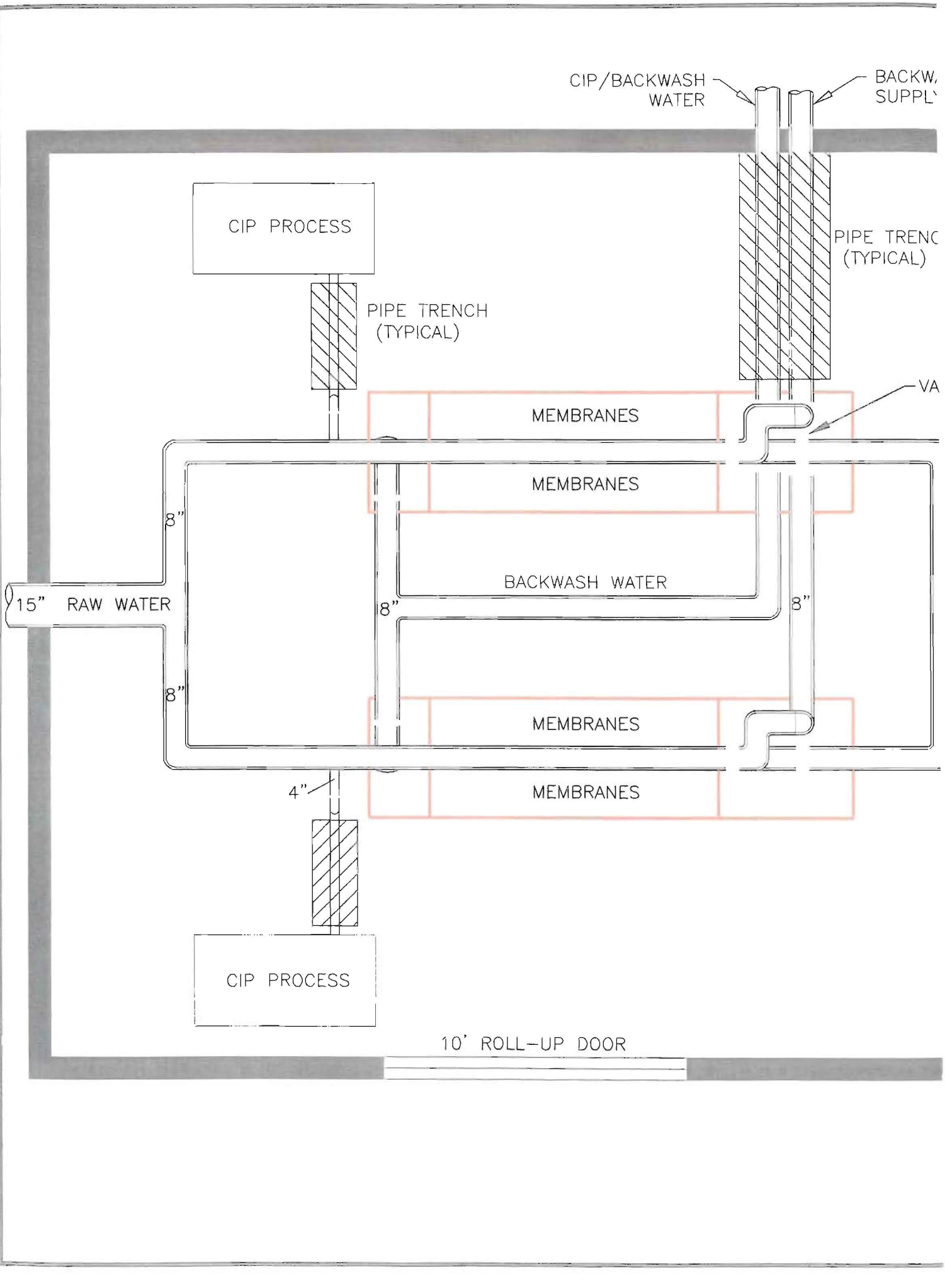


SCALE: 1"=4'

DETAILED EQUIPMENT LAYOUT
WATER SUPPLY STUDY
CUTLER-OROSI AREA



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Appendix “E”

Noise Study Report

Cutler-Orosi Community Plan Update

Noise Study Report

June 2020

Prepared for:
Tulare County RMA
5961 South Mooney Boulevard
Visalia, California 93277

Prepared by:
VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722
Project Manager: Jason Ellard

Cutler-Orosi Community Plan Update
Noise Study Report

Study Team

- ✓ Georgiena Vivian, President, VRPA Technologies, Inc., gvivian@vrpatechnologies.com, (559) 259-9257
- ✓ Jason Ellard, Transportation Engineer, VRPA Technologies, Inc., jellard@vrpatechnologies.com, (559) 271-1200

Table of Contents

Appendices

List of Tables

List of Figures

Executive Summary

This Noise Study Report (NSR) has been prepared for the purpose of analyzing potential noise impacts related to the Cutler-Orosi Community Plan Update. This NSR will provide a policy framework for addressing potential noise impacts encountered in the planning process. The NSR shall be used as a guide for establishing land use patterns that minimize noise impacts on the community and shall include measures and solutions to address existing and foreseeable noise conflicts.

IMPACTS

Highway and roadway traffic noise levels are generally dependent upon three primary factors, which include the traffic volume, the traffic speed, and the percent of heavy vehicles on the roadway. Traffic generated noise is the result of vehicle engines, exhaust, tires, and wind generated by taller vehicles. Vehicles with defective mufflers or faulty equipment have the propensity to increase traffic noise. Traffic noise levels are reduced by distance, terrain, vegetation, and natural/manmade obstacles as noise receptors move away from the highway/roadway.

A total of four (4) noise receivers (noise monitoring sites) were evaluated in the Cutler-Orosi community plan area. Tables E-1 and E-2 characterize the results of the existing and future noise conditions at the four (4) noise receivers evaluated in the study area. The noise receivers represent sensitive land uses in the Cutler-Orosi community.

Results of the analysis, as documented in Table E-1, show that existing noise levels in the Cutler-Orosi community do not exceed Tulare County's Land Use Compatibility for Community Noise Environments. The sensitive land uses represented by Receiver's 1, 3, and 4 currently experience noise levels at 60 Ldn dB, which is the maximum noise level for the residential land use.

Table E-2 shows the predicted noise levels at sensitive land uses in the community that were evaluated under Future Year 2040 conditions. Results of the analysis show that sensitive land uses reflected by Receivers 1, 3, and 4 will exceed Tulare County's Land Use Compatibility for Community Noise Environments for the Future Year 2040 No Build scenario. Table E-2 also shows that implementation of the Cutler-Orosi Community Plan Update will not increase ambient noise levels in the Cutler-Orosi community beyond Future Year 2040 No Build conditions.

Overall traffic volumes in the study area are expected to increase due to growth in population and employment anticipated under the Cutler-Orosi Community Plan Update. A comparison of existing noise levels to the estimated future year noise levels indicates that the greatest increase between existing conditions and future conditions is 2.0 dB's. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in

traffic volumes as a result of the Cutler-Orosi Community Plan Update will not cause potentially significant impacts at sensitive land uses in the community.

Table E-1
Existing Traffic Noise Levels

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Existing Noise Level Ldn dB	Tulare County Noise Standard Ldn dB
1	Residential Development along SR 63 (Road 128), north of Avenue 419	100	60.0	60.0
2	Residential Development along Avenue 416, east of SR 63 (Road 128)	90	56.0	60.0
3	Residential Development along Road 124, south of Avenue 416	55	60.0	60.0
4	Residential Development/School along SR 63 (Road 128), north of Avenue 404	100	60.0	60.0

Source: VRPA Technologies, 2020

Table E-2
Future Year 2040 Traffic Noise Levels

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Future Year 2040 No Build Noise Level Ldn dB	Future Year 2040 Plus Build Noise Level Ldn dB	Noise Increase or Decrease (-)	Tulare County Noise Standard Ldn dB
1	Residential Development along SR 63 (Road 128), north of Avenue 419	100	62.0	62.0	0.0	60.0
2	Residential Development along Avenue 416, east of SR 63 (Road 128)	90	58.0	58.0	0.0	60.0
3	Residential Development along Road 124, south of Avenue 416	55	62.0	62.0	0.0	60.0
4	Residential Development/School along SR 63 (Road 128), north of Avenue 404	100	62.0	62.0	0.0	60.0

Source: VRPA Technologies, 2020

CEQA ENVIRONMENTAL CHECKLIST

In accordance with the California Environmental Quality Act (CEQA), the effects of the MOB Project were evaluated to determine if they will result in Project-Specific significant adverse impacts on the environment that are peculiar to the MOB Project or its site that differ from those impacts already analyzed and disclosed in the City's General Plan EIR. The criteria used to determine the significance of a noise impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines. Accordingly, noise impacts resulting from the MOB Project are considered significant if the MOB Project would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Long-Term Impacts

Future development within the Planning Area will result in increased traffic volumes, thus increasing noise levels in some areas. Tables E-1 and E-2 show the existing and Future Year 2040 predicted noise levels at the sensitive land uses evaluated in the study area. The results indicate that the changes in noise levels as a result of the community plan update are insignificant. The Cutler-Orosi Community Plan Update will result in a maximum increase of 2 decibels when compared to existing conditions. According to the Caltrans Technical Noise Supplement, the average healthy ear can barely perceive noise level changes of 3 dBA. As a result, it is anticipated that the Cutler-Orosi Community Plan Update will not expose persons to or generate noise levels in excess of standards in the local noise ordinance, or applicable standards of other agencies.

Short-Term Impacts

Construction noise represents a short-term impact on ambient noise levels. Although most of the types of exterior construction activities associated with growth in the Cutler-Orosi Community will not generate continually high noise levels, occasional single-event disturbances from grading and construction activities are possible. Table 4-1, as shown in Section 4 of this report, depicts typical construction equipment noise. Construction equipment noise is controlled by the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

During the construction phase of any future development projects, noise from construction activities will add to the noise environment in the immediate area. Activities involved in construction would generate maximum noise levels, as indicated in Table 4-1, ranging from 77 to 85dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts

could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used.

In order to reduce potential construction noise impacts to sensitive receptors, all future development projects should comply with the following measure:

The hours of future construction on the Project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.

The Tulare County Development Department is responsible for processing approvals of site plans that implement conditions of approval. Any improvement plans reviewed by the County should contain the provisions as listed above. The Tulare County Community Development Department is also responsible for ensuring that the mitigation measures are complied with prior to the issuance of any construction permits.

Mitigation Measures

No specific significant impacts were identified as part of this noise analysis. However, the specific impacts on noise will be evaluated as part of the County's project-level environmental review process for future land use development(s). Tulare County will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. The mitigation measures referenced below should be implemented for all future land use development projects:

- ✓ Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.
- ✓ Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.
- ✓ To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.
- ✓ Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.

- ✓ To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.

- ✓ To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.

- ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plan rests with Tulare County and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid significant impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. The implementation of the above-notated mitigation strategies is intended to avoid significant impacts.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Vibration levels from various types of construction equipment are shown in Table 3-5, which is provided in Section 3.3 of this report. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). Using the highest vibration level shown in Table 3-5 (Lv 87), the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Cutler-Orosi Community Plan Update would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 3-5, ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.

Mitigation Measures

No specific significant impacts were identified as part of this noise analysis. However, the

specific impacts on noise and groundborne vibration will be evaluated as part of Tulare County's project-level environmental review process for future land use development(s). Tulare County will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. The mitigation measures referenced below should be implemented for all future land use development projects:

- ✓ Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.
- ✓ Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.
- ✓ To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.
- ✓ Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.
- ✓ To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.
- ✓ To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.
- ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plan rests with Tulare County and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid significant impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. The implementation of the above-notated mitigation strategies is intended to avoid significant impacts.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Cutler-Orosi community is not located within two miles of a public airport or public use airport.

1.0 Introduction

This Noise Study Report (NSR) has been prepared for the purpose of analyzing potential noise impacts related to the Cutler-Orosi Community Plan Update. This NSR will provide a policy framework for addressing potential noise impacts encountered in the planning process. The NSR shall be used as a guide for establishing land use patterns that minimize noise impacts on the community and shall include measures and solutions to address existing and foreseeable noise conflicts.

1.1 Description of the Region/Project

The Cutler-Orosi community is located in the San Joaquin Valley, approximately 13 miles north of the City of Visalia. The community is located in the northeastern portion of Tulare County at an elevation of 366 feet above sea level. Figure 1-1 shows the Cutler-Orosi community in the context of its region. The transportation system within the planning area includes State Route (SR) 63 and 201 in addition to several County routes and a grid of local streets as shown in Figure 1-2. Tulare County is one of eight counties that comprise the San Joaquin Valley, which is bounded on the west by the Coast Range Mountains, on the east by the Sierra Nevada Mountains, on the south by the Tehachapi Mountains, and on the north by the Sacramento River Delta area.

1.2 Existing Roadway Network

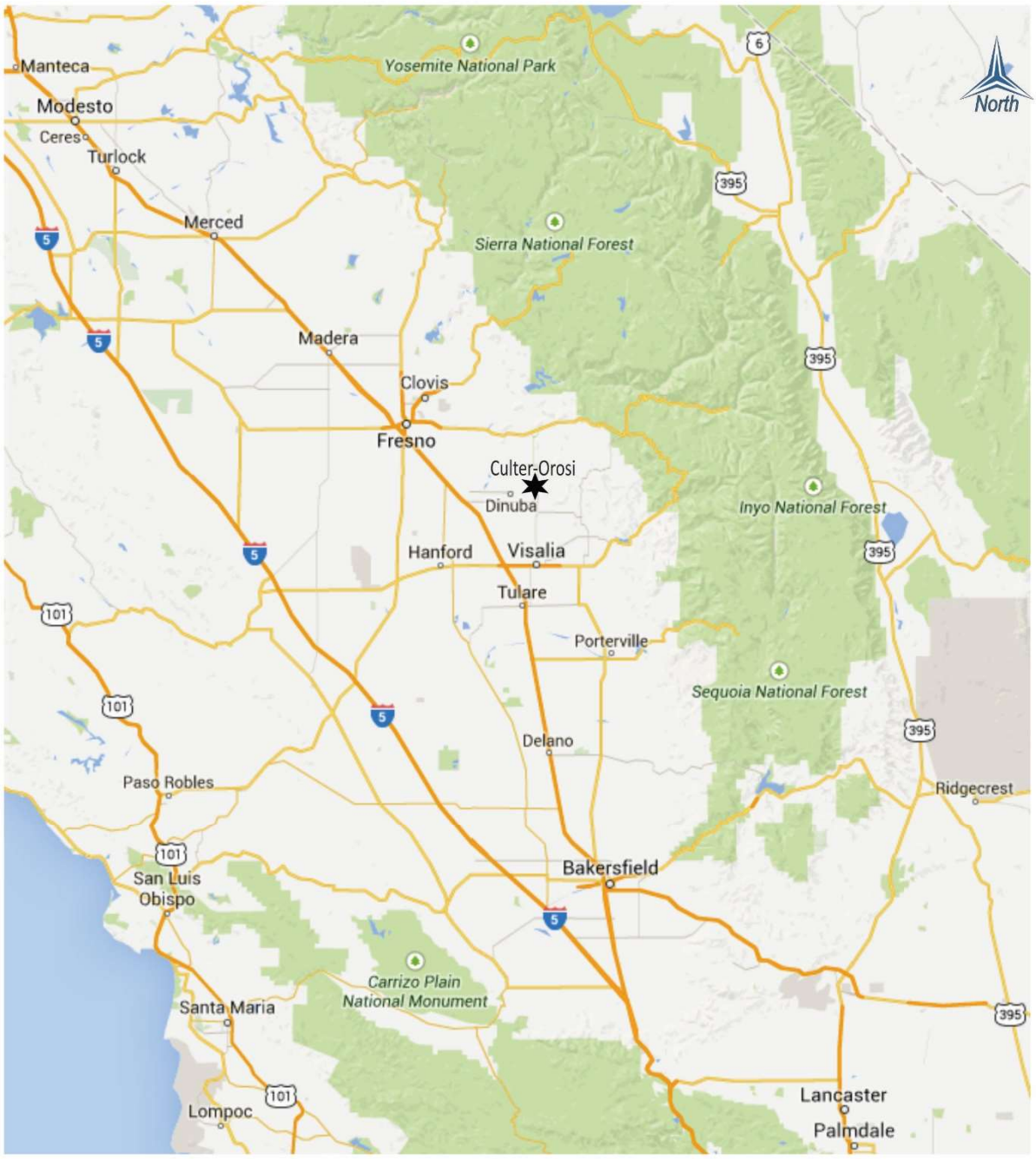
Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and highways do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads.

The following are general descriptions of the roadway types shown in the Cutler-Orosi Communities:

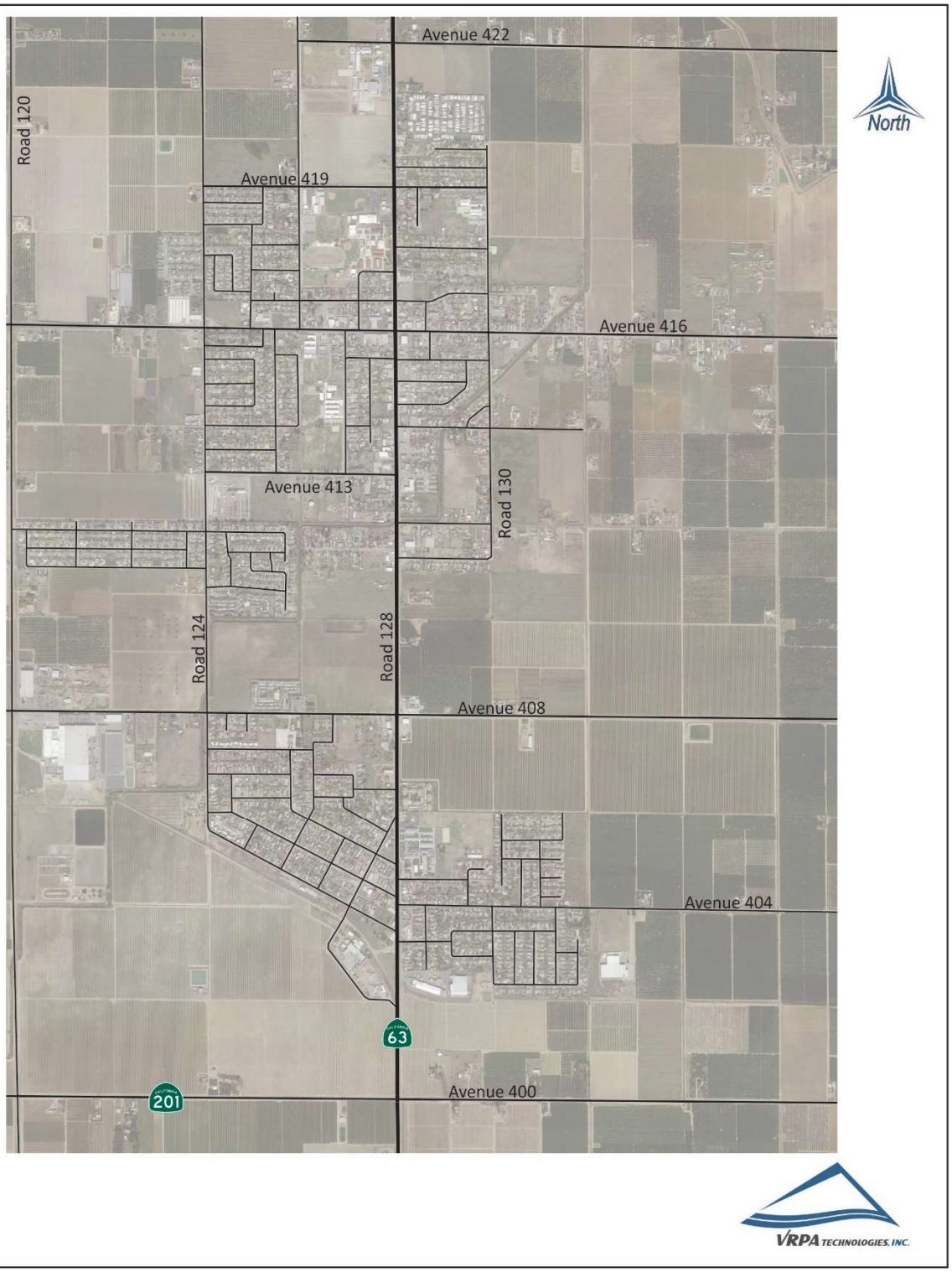
- ✓ **State Freeways (which may be freeways, expressways, or conventional highways)** – Connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas.

  State Route (SR) 63 is the principle state highway serving the Cutler-Orosi Community. SR 63 primarily exists as an undivided four-lane road without bike lanes throughout Cutler-Orosi Community. On-street parking is currently permitted on the four-lane segments. The posted speed limit is generally 35-40 mph throughout the community (except for school zones with a posted speed of 25 mph). The posted speed limit outside of these communities is generally 55 mph. According to Caltrans' website, the average annual daily traffic (AADT) along SR 63 in the study area was approximately 12,100 south of Avenue 416 and 7,300 south of Avenue 400 in 2017.

Cutler-Orosi Community Plan Update **Figure 1-1**
Regional Location



Cutler-Orosi Community Plan Update **Figure 1-2**
Study Area



SR 201-Avenue 400 (west of SR 63) – currently exists as an undivided two-lane road in the study area. The posted speed limit is generally 55 mph. According to Caltrans' website, the AADT along SR 201 in the study area was approximately 3,000 in 2017.

- ✓ **Arterials** – Serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.

  Avenue 416 (west of Road 130) – currently an undivided four-lane minor arterial without bike lanes, with a posted speed limit of 25 and 40 mph through the study area.

- ✓ **Collectors** – Provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers and limited direct access to abutting properties.

  Avenues 408, 413, 419, and 422 are classified as collector streets in the study area.

- ✓ **Local Streets** – Provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

1.3 Sound and the Human Ear

The amplitude of a sound determines its loudness. Loudness of sound increases and decreases with increasing and decreasing amplitude. Sound pressure amplitude is measured in units of micro-Newton per square meter (N/m2), also called micro-Pascal (µPa). One µPa is approximately one-hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million µPa, or 10 million times the pressure of the weakest audible sound (20 µPa). Because expressing sound levels in terms of µPa would be very cumbersome, sound pressure level (SPL) is used instead to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called bels, named after Alexander Graham Bell. To provide a finer resolution, a bel is subdivided into 10 decibels, abbreviated dB.

1.3.1 *A-Weighted Decibels*

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. Human hearing is limited not only in the range of audible frequencies but also in the way it perceives the SPL in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound of higher or lower frequency with

the same magnitude. To approximate the frequency response of the human ear, a series of SPL adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency dependent. The A-scale weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-scale, C-scale, D-scale), but these scales are rarely, if ever, used in conjunction with highway traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted dBAs. In environmental noise studies, A-weighted SPLs are commonly referred to as noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers. With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report:

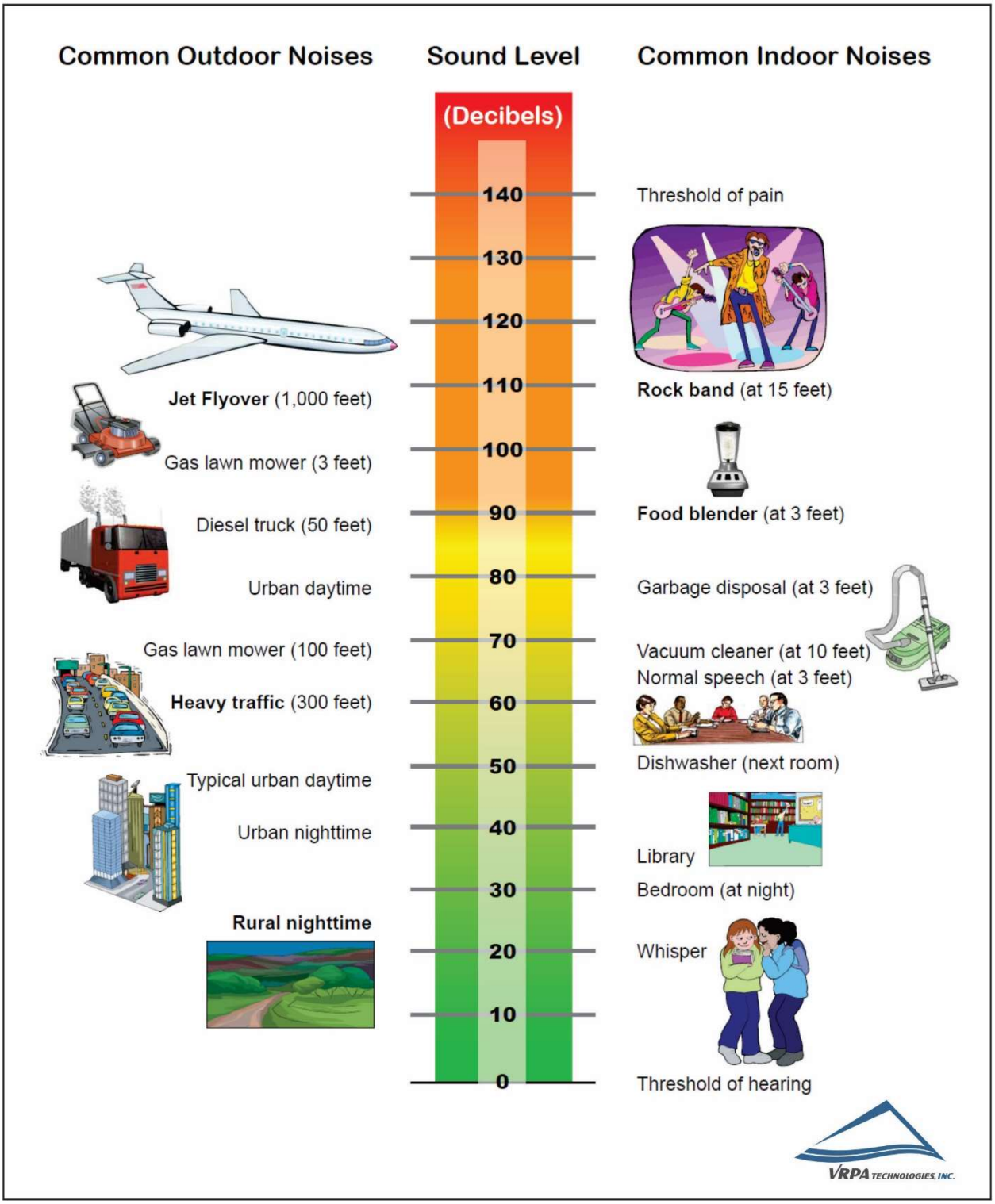
- ✓ Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- ✓ Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- ✓ A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- ✓ A 10 dB change is subjectively heard as approximately a doubling in loudness.

1.3.2 *Sound Pressure Levels and Decibels*

Because of the ability of the human ear to detect a wide range of sound pressure fluctuations, sound pressure levels are expressed in logarithmic units called decibels. The sound pressure level in decibels is calculated by taking the log of the ratio between the actual sound pressure and the reference sound pressure squared. The reference sound pressure is considered the absolute hearing threshold. In addition, because the human ear is not equally sensitive to all sound frequencies, a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. A dBA scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The basis for comparison is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This dBA scale has been chosen by most authorities for purposes of environmental noise regulation. Typical indoor and outdoor noise levels are presented in Figure 1-3 (Common Environmental Sound Levels).

Cutler-Orosi Community Plan Update
Common Environmental Sound Levels

Figure 1-3



1.3.3 *Sound, Noise, and Acoustics*

Sound is a disturbance created by a moving or vibrating source in a gaseous or liquid medium or the elastic stage of a solid and is capable of being detected by the hearing organs. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to a hearing organ, such as a human ear. For traffic sound, the medium of concern is air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired. Sound is a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Likewise, without a medium to transmit sound pressure waves, there is also no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound.

1.3.4 *Frequency and Hertz*

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch, like the low notes on a piano, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz). A frequency of 250 cycles per second is referred to as 250 Hz. High frequencies are sometimes more conveniently expressed in units of kilo-Hertz (kHz), or thousands of Hertz. The extreme range of frequencies that can be heard by the healthiest human ear spans from 16–20 Hz on the low end to about 20,000 Hz (or 20 kHz) on the high end.

1.3.5 *Addition of Decibels*

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces an SPL of 70 dBA as it passes an observer, two cars passing simultaneously would not produce 140 dBA; they would, in fact, combine to produce 73 dBA. When two sounds of equal SPL are combined, they will produce a combined SPL 3 dBA greater than the original individual SPL. In other words, sound energy must be doubled to produce a 3 dBA increase. If two sound levels differ by 10 dBA or more, the combined SPL is equal to the higher SPL; in other words, the lower sound level does not increase the higher sound level.

1.4 Characteristics of Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate

between 3.0 and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6.0 and about 7.5 dBA per doubling of distance. Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

1.4.1 *Noise Descriptors*

Noise in the daily environment fluctuates over time. Some of the fluctuations are minor; some are substantial. Some noise levels occur in regular patterns; others are random. Some noise levels fluctuate rapidly, others slowly. Some noise levels vary widely; others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following is a list of the noise descriptors most commonly used in traffic noise analysis:

- ✓ **Equivalent Sound Level (Leq) -** Leq represents an average of the sound energy occurring over a specified period. Leq is, in effect, the steady-state sound level that, in a stated period, would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. The one-hour A-weighted equivalent sound level, Leq(h), is the energy average of the A-weighted sound levels occurring during a one-hour period and is the basis for the Noise Abatement Criteria (NAC) used by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA).
- ✓ **Percentile-Exceeded Sound Level (Lx) -** Lx represents the sound level exceeded for a given percentage of a specified period. For example, L10 is the sound level exceeded 10 percent of the time, and L90 is the sound level exceeded 90 percent of the time.
- ✓ **Maximum Sound Level (Lmax) -** Lmax is the highest instantaneous sound level measured during a specified period.

1.4.2 *Sound Propagation*

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise reduces with distance depends on the following factors:

- ✓ Geometric Spreading - Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of six (6) dBA for each doubling of distance. Highway noise is not a single, stationary point source of sound. The movement of the vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than

a point. This line source results in cylindrical spreading rather than the spherical spreading that results from a point source. The change in sound level from a line source is three dBA per doubling of distance.

- ✓ Ground Absorption - Most often, the noise path between the highway and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 60 m (200 ft), prediction results based on this scheme are sufficiently accurate. For acoustically hard sites (i.e., those sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receiver), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, between the source and the receiver), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.
- ✓ Atmospheric Effects - Research by Caltrans and others has shown that atmospheric conditions can have a significant effect on noise levels within 60 m (200 ft) of a highway. Wind has been shown to be the most important meteorological factor within approximately 150 m (500 ft) of the source, whereas vertical air temperature gradients are more important for greater distances. Other factors such as air temperature, humidity, and turbulence also have significant effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur as a result of temperature inversion conditions (i.e., increasing temperature with elevation).
- ✓ Shielding by Natural and Human-Made Features - A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction.

1.5 Methodology

When preparing an NSR, guidelines set by affected agencies must be followed. Acoustical terminology used for this NSR is documented in Appendix A. In analyzing noise levels, the FHWA Highway Traffic Noise Prediction methodology must be applied. Safety concerns must also be analyzed to determine the need for appropriate mitigation resulting from increased noise due to increased traffic and other evaluations such as the need for noise barriers and other noise abatement improvements. Unless otherwise stated, all sound levels reported are in A-weighted

decibels (dBA). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards use A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

1.5.1 *California Environmental Quality Act*

CEQA requires a strictly no-build versus build analysis to assess whether a project will have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

1.5.2 *Tulare County*

The Health and Safety section of Tulare County's 2030 General Plan serves as the primary policy statement for the County for implementing policies to maintain and improve the noise environment in Tulare County. The Health and Safety section presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of Tulare County's noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.

Table 1-1 shows Tulare County's Land Use Compatibility for Community Noise Environments. During preparation of this NSR, conformance of the proposed amendment with the Land Use Compatibility for Community Noise Environments is used to evaluate potential noise impacts and provides criteria for environmental impact findings and conditions for project approval.

1.5.3 *Study Methods and Procedures*

Site Selection

Developed and undeveloped land uses in the project vicinity were identified through land use maps, aerial photography, site inspection, and Tulare County staff recommendations. Within each land use category, sensitive receptors were then identified. Land uses in the project vicinity include single-family residences, commercial, office, recreational, and industrial uses. The generalized land use data and location of particular sensitive receptors were the basis for the selection of the noise monitoring and analysis sites.

Noise Level Measurement Program

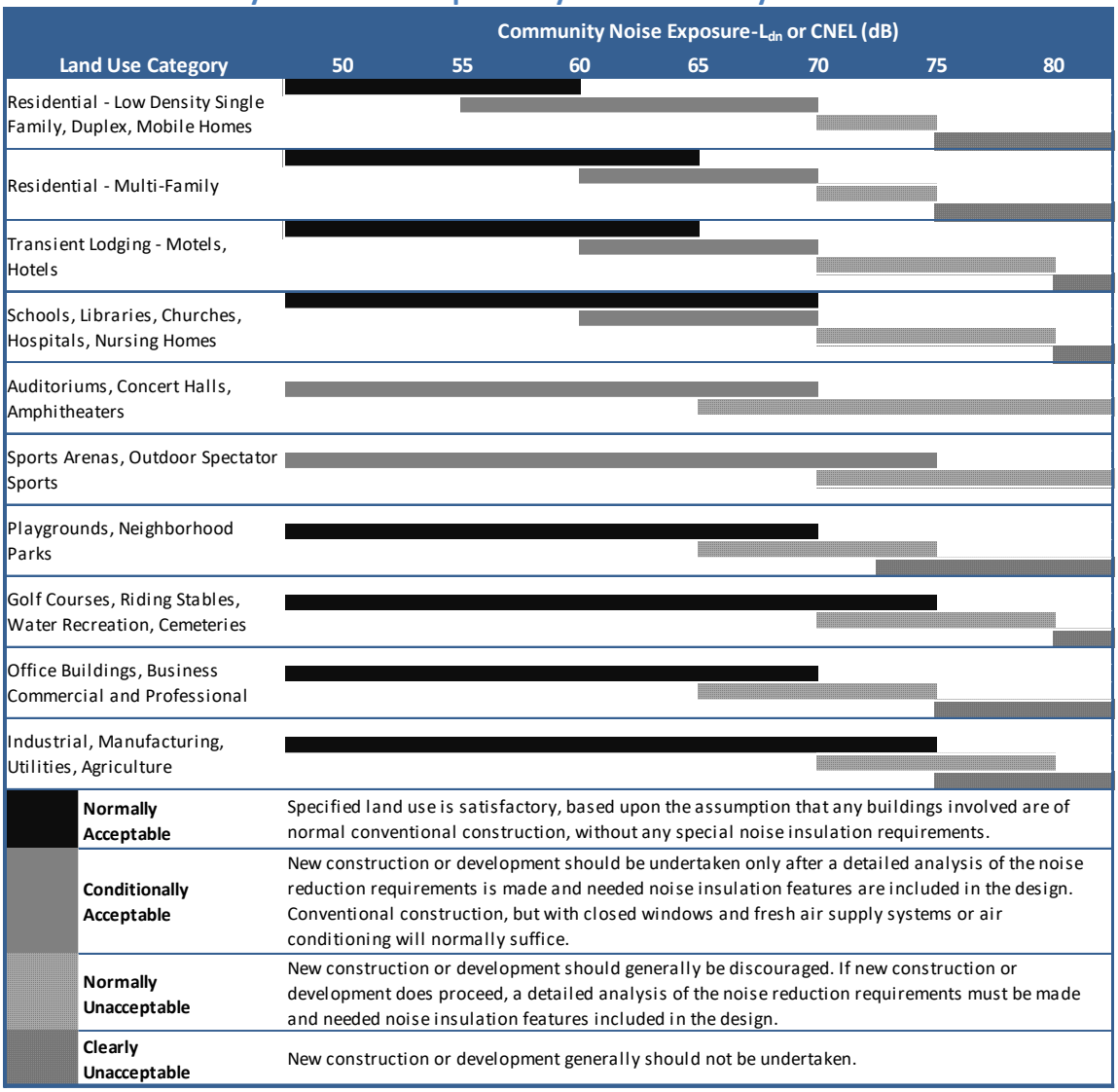
Existing noise levels in the Cutler-Orosi community were sampled during the PM peak hour because traffic counts conducted in the study area show a greater volume of traffic in the PM peak hour than the AM peak hour. All measurements were made using an Extech Type 2 sound

level meter datalogger.

The following measurement procedure was utilized:

- ✓ Calibrate sound level meter.
- ✓ Set up sound level meter at a height of 1.5 m (5 ft).
- ✓ Commence noise monitoring.
- ✓ Collect site-specific data such as date, time, weather conditions, and distance from sound level meter to the center of the roadway.
- ✓ Stop measurement after 15 minutes.
- ✓ Proceed to next monitoring site and repeat.

Table 1-1
Tulare County Land Use Compatibility for Community Noise Environments



Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: Tulare County General Plan

2.0 Existing Conditions

Noise can generally be described as unwanted sound and has been cited as being a health problem, not just in terms of actual physiological damages such as hearing impairment, but also in terms of inhibiting general wellbeing and contributing to stress and annoyance. Long or repeated exposure to sounds at or above 85 decibels can cause hearing loss. The louder the sound, the shorter the time period before hearing loss can occur. Sounds of less than 75 decibels are unlikely to cause hearing loss even after long exposure.[1]

Existing noise levels in the Cutler-Orosi Communities are principally generated by transportation noise sources. Vehicular traffic noise is the dominant source in most areas, but amplified sound generated from commercial sites are also sources of environmental noise in the local areas surrounding these operations. Noise can be generated by either mobile or stationary sources.

- ✓ Mobile source noise is typically associated with transportation, such as cars, trains, and aircraft. The most significant mobile source of noise in the Cutler-Orosi Communities is Road 128 (Route 63) that runs through the community center.

- ✓ Stationary noise sources are any 'fixed' noise generating source. Examples of stationary sources include outdoor machinery (i.e. such as heating/air conditioning systems) and amplified events. Noise generated from construction sites also falls into the category of stationary sources.

2.1 Traffic Noise

Highway and roadway traffic noise levels are generally dependent upon three primary factors, which include the traffic volume, the traffic speed, and the percent of heavy vehicles on the roadway. Traffic generated noise is the result of vehicle engines, exhaust, tires, and wind generated by taller vehicles. Vehicles with defective mufflers or faulty equipment have the propensity to increase traffic noise. Traffic noise levels are reduced by distance, terrain, vegetation, and natural/manmade obstacles as noise receptors move away from the highway/roadway.

To assess existing noise conditions, VRPA Technologies staff conducted noise level measurements within the Cutler-Orosi Community and tabulated the results. The weather during the time of the noise measurements consisted of fair-weather conditions with wind speeds of less than 5 mph. The purpose of the measurements was to evaluate existing noise levels in the study area and to calibrate the Federal Highway Administration (FHWA) Traffic Noise model, which will be used to assess future year traffic conditions.

A total of three (3) field receptors (noise monitoring sites) were evaluated in the Cutler-Orosi area. These field receptor locations are shown in Figure 2-1. Table 2-1 characterizes the results of the existing noise conditions at the three (3) field receptors evaluated in the study area. The sound monitoring was performed at locations near existing sensitive receptors.

1 Source: National Institute on Deafness and Other Hearing Disorders

One (1) additional receptor along the SR 63 (Road 128) corridor was evaluated in the TNM 2.5 model and results are depicted in Table 2-1. These modeled receptor locations are shown in Figure 2-1.

The results shown in Table 2-1 were used to develop the traffic noise exposure levels at various setbacks to achieve 60, 65, 70, 75, and 80 L_{dn} dB. Table 2-2 shows the anticipated noise levels for each roadway evaluated within the study area. In general, SR 63 carries a majority of the traffic in the Cutler-Orosi Community on a daily and peak hour basis.

Traffic noise exposure is mainly a function of the number of vehicles on a given roadway per day, the speed of those vehicles, the percentage of medium and heavy trucks in the traffic volume, and the receiver's proximity to the roadway. Every vehicle passage on every roadway in the community radiates noise.

Existing high noise levels along major streets and highways are generally caused by traffic and congestion. Potential impacts along these facilities are generally classified as follows:

- ✓ Low - Ldn 59 dB or below
- ✓ Moderate - Ldn 60 dB to 65 dB
- ✓ High - Ldn 66 dB or greater

The potential for adverse noise impacts is generally moderate to high along most segments of State highways and is generally low to moderate along most segments of community streets.

Results of the analysis, as documented in Table 2-1 and Table 2-2, shows that existing noise levels in the Cutler-Orosi community do not exceed Tulare County's Land Use Compatibility for Community Noise Environments. The sensitive land uses represented by Receiver's 1, 3, and 4 currently experience noise levels at 60 Ldn dB, which is the maximum noise level for the residential land use.

2.2 Stationary Noise

Industrial and agricultural land uses in the Cutler-Orosi community are the primary source of stationary noise in the community. In general, noise generated from the existing development in the community is not substantial enough to cause a nuisance to residents, employees, or patrons of the community.

Cutler-Orosi Community Plan Update
Noise Receptor Locations

Figure 2-1

Table 2-1
Existing Traffic Noise Levels

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Existing Noise Level Ldn dB	Tulare County Noise Standard Ldn dB
1	Residential Development along SR 63 (Road 128), north of Avenue 419	100	60.0	60.0
2	Residential Development along Avenue 416, east of SR 63 (Road 128)	90	56.0	60.0
3	Residential Development along Road 124, south of Avenue 416	55	60.0	60.0
4	Residential Development/School along SR 63 (Road 128), north of Avenue 404	100	60.0	60.0

Source: VRPA Technologies, 2020

Table 2-2
Traffic Noise Contours

STREET SEGMENT	SEGMENT DESCRIPTION	DISTANCE TO CONTOUR (feet)				
		80 L_{dn} dB	75 Ldn dB	70 Ldn dB	65 Ldn dB	60 Ldn dB
SR 63 (Road 128)						
Avenue 419 to Avenue 416	4 lanes Undivided	14	22	37	61	100
Avenue 416 to Avenue 400	4 lanes Undivided	14	22	37	61	100
Avenue 416						
SR 63 (Road 128) to Road 136	4 lanes Undivided	8	13	22	37	60
Road 124						
South of Avenue 416	2 lanes Undivided	7	12	20	33	55

Source: VRPA Technologies, 2020

3.0 Future Year 2040 Conditions

This section provides an assessment of the anticipated noise conditions in the future as it relates to the Cutler-Orosi Community Plan Update and the impact of noise on the surrounding land uses within the study area. The noise impacts to the Cutler-Orosi Communities were analyzed considering future traffic conditions in the year 2040. The levels of traffic expected along SR 63 (Road 128) and other roadways in the year 2040 relate to the cumulative effect of traffic increases resulting from the implementation of the General Plans of local agencies. To project future traffic roadway conditions in the year 2040 considering the current Cutler-Orosi Community land use plan, a variety of sources were used. The Tulare County Association of Governments (TCAG) Future Year 2040 model exhibited a growth rate of approximately 1.5% in the study area. Traffic projections in Caltrans' SR 63 and SR 210 Transportation Concept Report (TCR) displayed a growth rate of approximately 1.75% and 2.66% in the study area, respectively. Historical growth in the unincorporated portion of Tulare County is approximately 1.3% based on population trends as forecasted in the Tulare County General Plan 2030 Update. Cutler-Orosi census data shows that the population has not increased since the year 2010. A growth rate of 2.0% is consistent with the overall growth in the study area and was used to evaluate Future Year 2040 No Build conditions.

The net area increase in the urban development boundary is 712.1 acres when comparing the proposed Urban Development boundary and the Existing boundary. While this represents a 30% increase in Urban Development boundary, historical growth in and around the Cutler-Orosi Community will primarily remain constant. A growth rate of 2.25% was used to estimate the overall growth in the study area considering the proposed Land Use for the Cutler-Orosi Community given the increase in the Urban Development boundary.

3.1 Traffic Noise

Highway and roadway traffic noise levels are generally dependent upon three primary factors, which include the traffic volume, the traffic speed, and the percent of heavy vehicles on the roadway. Traffic generated noise is the result of vehicle engines, exhaust, tires, and wind generated by taller vehicles. Vehicles with defective mufflers or faulty equipment have the propensity to increase traffic noise. Traffic noise levels are reduced by distance, terrain, vegetation, and natural/manmade obstacles as noise receptors move away from the highway/roadway.

Traffic volumes, truck mix, and vehicle speeds were used as inputs to the FHWA TNM 2.5 model for the Future Year 2040 scenario. Traffic volumes and truck mix were determined by Caltrans' SR 63 and 201 Transportation Concept Reports (TCR) and existing traffic counts collected in the study area. Table 3-1 shows the predicted noise levels at sensitive land uses in the community that were evaluated under Future Year 2040 conditions. Results of the analysis show that sensitive land uses reflected by Receivers 1, 3, and 4 will exceed Tulare County's Land Use

Compatibility for Community Noise Environments for the Future Year 2040 No Build scenario. Table 3-1 also shows that implementation of the Cutler-Orosi Community Plan Update will not increase ambient noise levels in the Cutler-Orosi community beyond Future Year 2040 No Build conditions.

Overall traffic volumes in the study area are expected to increase due to growth in population and employment anticipated under the Cutler-Orosi Community Plan Update. A comparison of existing noise levels to the estimated future year noise levels indicates that the greatest increase between existing conditions and future conditions is 2.0 dB's. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of the Cutler-Orosi Community Plan Update will not cause potentially significant impacts at sensitive land uses in the community.

Tables 3-2 and 3-3 shows the Future Year 2040 traffic noise exposure levels at various setbacks to achieve 60, 65, 70, 75, and 80 L_{dn} dB in the Cutler-Orosi community area. Table 3-2 shows the anticipated noise levels for each roadway evaluated within the study area.

Table 3-1
Future Year 2040 Traffic Noise Levels

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Future Year 2040 No Build Noise Level Ldn dB	Future Year 2040 Plus Build Noise Level Ldn dB	Noise Increase or Decrease (-)	Tulare County Noise Standard Ldn dB
1	Residential Development along SR 63 (Road 128), north of Avenue 419	100	62.0	62.0	0.0	60.0
2	Residential Development along Avenue 416, east of SR 63 (Road 128)	90	58.0	58.0	0.0	60.0
3	Residential Development along Road 124, south of Avenue 416	55	62.0	62.0	0.0	60.0
4	Residential Development/School along SR 63 (Road 128), north of Avenue 404	100	62.0	62.0	0.0	60.0

Source: VRPA Technologies, 2020

Table 3-2
Future Year 2040 No Build Traffic Noise Contours

STREET SEGMENT	SEGMENT DESCRIPTION	DISTANCE TO CONTOUR (feet)				
		80 L_{dn} dB	75 Ldn dB	70 Ldn dB	65 Ldn dB	60 Ldn dB
SR 63 (Road 128)						
Avenue 419 to Avenue 416	4 lanes Undivided	17	27	45	74	122
Avenue 416 to Avenue 400	4 lanes Undivided	17	27	45	74	122
Avenue 416						
SR 63 (Road 128) to Road 136	4 lanes Undivided	10	16	27	45	74
Road 124						
South of Avenue 416	2 lanes Undivided	9	15	25	41	67

Source: VRPA Technologies, 2020

Table 3-3
Future Year 2040 Plus Build Traffic Noise Contours

STREET SEGMENT	SEGMENT DESCRIPTION	DISTANCE TO CONTOUR (feet)				
		80 L_{dn} dB	75 Ldn dB	70 Ldn dB	65 Ldn dB	60 Ldn dB
SR 63 (Road 128)						
Avenue 419 to Avenue 416	4 lanes Undivided	17	27	45	74	122
Avenue 416 to Avenue 400	4 lanes Undivided	17	27	45	74	122
Avenue 416						
SR 63 (Road 128) to Road 136	4 lanes Undivided	10	16	27	45	74
Road 124						
South of Avenue 416	2 lanes Undivided	9	15	25	41	67

Source: VRPA Technologies, 2020

3.2 Stationary Noise

Stationary noise sources can result from industrial and other processes and can have a more permanent and consistent impact on people. Stationary noise sources include commercial operations, agricultural production, school playgrounds, generators, and lawn maintenance equipment. These stationary noise sources can impact people even in the presence of best available noise control technologies. These noise sources can be continuous and may be annoying to people who live nearby.

Industrial land uses are typically located in industrial districts and/or near commercial uses which are generally situated away from residences and other sensitive noise receptors. Noise generated by these types of uses contribute to the ambient noise environment in the immediate vicinity of these uses and should be evaluated for noise impacts where either new noise-sensitive uses are proposed nearby or where similar uses are proposed in existing residential areas.

As noted in Section 2.2, noise generated from the existing development along SR 198 (Sierra Drive) is not substantial enough to cause a nuisance to residents, employees, or patrons of the community.

3.3 Ground-borne Vibration

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. The most common exterior sources of ground vibration that can be noticeable to humans inside residences include constructions activities, train operations, and street traffic. Table 3-4 provides some common sources of ground vibration and the relationship to human perception. This information comes from the Federal Transit Administration's "Basic Ground-Bourne Vibration Concepts."

3.3.1 Construction Vibrations

Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures, but can cause low rumbling sounds and feelable vibrations for buildings very close to the site.

Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Vibration levels from various types of construction equipment are shown in Table 3-5. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions.

Table 3-4
Typical Levels of Ground-Borne Vibration

Human/Structural Response	Velocity Level, VdB	Typical Events (50 ft. Setback)
Threshold, minor cosmetic damage fragile buildings	100	Blasting from construction projects
		Bulldozers and other heavy tracked construction equiment
Difficulty with tasks such as reading a video or computer screen	90	
		Commuter rail, upper range
Residential annoyance, infrequent events (e.g commuter rail)	80	Rapid transit, upper range
		Commuter rail, typical
Residential annoyance, infrequent events (e.g rapid transit)		Bus or truck over bump
	70	Rapid transit, typical
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration		Bus or truck, typical
	60	
		Typical background vibration
	50	

Table 3-5
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)	Approximate L_v* at 25 ft
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

* RMS velocity in decibels (VdB) re 1 minch/second

Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not significant unless the vibration exceeds 75 VdB according to the United States Department of Transportation. In order to estimate the impact of vibrations from construction activities at distances of 100 feet, 150 feet, and 200 feet, the following formula was applied.

Lv(D) = Lv(25 ft) – 20 log (D/25)

Using the highest vibration level shown in Table 3-5 (Lv 87) and the formula shown above, the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Cutler-Orosi Community Plan Update would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 3-5, ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.

3.4 Noise Barriers

Shielding by barriers can be obtained by placing walls, berms or other structures between the traffic or other noise source and the receiver. The effectiveness of a barrier depends upon blocking line-of-sight between the traffic and receiver, and is improved with increasing the distance the sound must travel to pass over the barrier as compared to a straight line from source to receiver. For a noise barrier to be effective, it must not only be sufficiently tall to intercept

line of sight from noise source to receiver, but it must also be sufficiently long to reduce the potential for sound to flank around ends of the barrier. Barrier effectiveness depends upon the relative heights of the source, barrier and receiver. In general, barriers are most effective when placed close to either the receiver or the traffic or other noise source.

For maximum effectiveness, barriers must be continuous and relatively airtight along their length and height. To ensure that sound transmission through the barrier is insignificant, barrier mass should be about 4 lbs. /square foot, although a lesser mass may be acceptable if the barrier material provides sufficient transmission loss in the frequency range of concern. Satisfaction of the above criteria requires substantial and well-fitted barrier materials, placed to intercept line of sight to all significant traffic noise sources. Earth, in the form of berms or the face of a depressed area, is also an effective barrier material. There are practical limits to the noise reduction provided by barriers. For highway traffic noise, a 5 to 10 dB noise reduction may often be reasonably attained. A 15 dB noise reduction is sometimes possible, but a 20 dB noise reduction is extremely difficult to achieve. Barriers usually are provided in the form of walls, berms, or berm/wall combinations. The use of an earth berm in lieu of a solid wall will provide up to 3 dB additional attenuation over that attained by a solid wall alone, due to the absorption provided by the earth. Berm/wall combinations offer slightly better acoustical performance than solid walls and are often preferred for aesthetic reasons.

4.0 Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in Project-specific significant adverse impacts on the environment. The criteria used to determine the significance of a noise impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines. Accordingly, noise impacts resulting from the Cutler-Orosi Community Plan Update are considered significant if the Community Plan Update would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Generation of excessive groundborne vibration or groundborne noise levels?

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Each of these thresholds are evaluated individually below to determine whether the Cutler-Orosi Community Plan Update will cause a significant effect on the environment. Where impacts are found to be significant, mitigation measures are recommended that would avoid or reduce the impact to less than significant.

4.1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

4.1.1 Long-Term Impacts

Future development within the Planning Area will result in increased traffic volumes, thus increasing noise levels in some areas. Tables 2-1, 2-2, 3-1, 3-2, and 3-3 show the existing and Future Year 2040 predicted noise levels at the sensitive land uses evaluated in the study area. The results indicate that the changes in noise levels as a result of the community plan update are insignificant. The Cutler-Orosi Community Plan Update will result in a maximum increase of 2 decibels when compared to existing conditions. According to the Caltrans Technical Noise Supplement, the average healthy ear can barely perceive noise level changes of 3 dBA. As a result, it is anticipated that the Cutler-Orosi Community Plan Update will not expose persons to

or generate noise levels in excess of standards in the local noise ordinance, or applicable standards of other agencies.

It should also be noted that there are minimal changes in the traffic noise exposure levels at various setbacks of 60, 65, 70, 75, and 80 L_{dn} dBA for the major roadways within the Cutler-Orosi community as shown in Tables 2-2, 3-2, and 3-3. The Cutler-Orosi Community Plan Update will not significantly impact noise levels within the community when compared to existing conditions.

4.1.2 Short-Term Impacts

Construction noise represents a short-term impact on ambient noise levels. Although most of the types of exterior construction activities associated with growth in the Cutler-Orosi Community will not generate continually high noise levels, occasional single-event disturbances from grading and construction activities are possible. Table 4-1 depicts typical construction equipment noise. Construction equipment noise is controlled by the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

During the construction phase of any future development projects, noise from construction activities will add to the noise environment in the immediate area. Activities involved in construction would generate maximum noise levels, as indicated in Table 4-1, ranging from 77 to 85dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used.

In order to reduce potential construction noise impacts to sensitive receptors, all future development projects should comply with the following measure:

The hours of future construction on the Project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.

The Tulare County Development Department is responsible for processing approvals of site plans that implement conditions of approval. Any improvement plans reviewed by the County should contain the provisions as listed above. The Tulare County Community Development Department is also responsible for ensuring that the mitigation measures are complied with prior to the issuance of any construction permits.

Table 4-1
Construction Equipment Noise

TYPE OF EQUIPMENT	Sound Levles Measured (dBA of 50 feet)
Rock Drills	85
Jack Hammers	85
Pneumatic Tools	85
Pumps	77
Dozers	85
Tractor	84
Front-End Loaders	80
Hydraulic Backhoe	80
Hydraulic Excavators	85
Graders	85
Air Compressors	80
Trucks	84

Source: Noise Control for Buildings and Manufacturing Plants (Bolt, Beranek and Newman, 1987).

Mitigation Measures

No specific significant impacts were identified as part of this noise analysis. However, the specific impacts on noise will be evaluated as part of the County's project-level environmental review process for future land use development(s). Tulare County will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. The mitigation measures referenced below should be implemented for all future land use development projects:

- ✓ Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.

- ✓ Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.

- ✓ To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.

- ✓ Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.

- ✓ To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.

- ✓ To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.

- ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plan rests with Tulare County and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid significant impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. The implementation of the above-notated mitigation strategies is intended to avoid significant impacts.

4.2 Generation of excessive groundborne vibration or groundborne noise levels?

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures but can cause low rumbling sounds and detectable vibrations for buildings very close to the site. Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Vibration levels from various types of construction equipment are shown in Table 3-5. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). Using the highest vibration

level shown in Table 3-5 (Lv 87), the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Cutler-Orosi Community Plan Update would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 3-5, ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.

Mitigation Measures

No specific significant impacts were identified as part of this noise analysis. However, the specific impacts on noise and groundborne vibration will be evaluated as part of Tulare County's project-level environmental review process for future land use development(s). Tulare County will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. The mitigation measures referenced below should be implemented for all future land use development projects:

- ✓ Project specific noise evaluation shall be conducted, and appropriate mitigation identified and implemented.

- ✓ Employ land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.

- ✓ To the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.

- ✓ Construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways, as appropriate and feasible, that are depressed below-grade of the existing sensitive land uses creates an effective barrier between the roadway and sensitive receptors.

- ✓ To the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.

- ✓ To the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.

- ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plan rests with Tulare County and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid significant impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. The implementation of the above-notated mitigation strategies is intended to avoid significant impacts.

4.3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Cutler-Orosi community is not located within two miles of a public airport or public use airport.

APPENDIX A
Acoustical Terminology

ACOUSTICAL TERMINOLOGY

The following terminology has been used for purposes of this NSR:

Ambient Noise Level:	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
CNEL:	Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 p.m. to 10p.m. and ten decibels to sound levels in the night before 7 a.m. and after 10 p.m.
Decibel, dBA:	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micro-newtons per square meter).
DNL/L_{dn}:	Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition often decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
L_{eq}:	Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.
L_{eq}(h):	The hourly value of $L_{eq.}$
L_{max}:	The maximum noise level recorded during a noise event
L_n:	The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). L_{10} equals the level exceeded 10 percent of the time.
L_n(h):	The hourly value of L_n.
Noise Exposure Contours:	Lines drawn about a noise source indicating constant levels

of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to the duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and the reference duration of one second

Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighing filter network. The A-weighing filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

Note: *CNEL and DNL represent daily levels of noise exposure averaged on an annual basis,* while L_n *represents the average noise exposure for a shorter time period, typically one hour.*

APPENDIX B
TNM 2.5 Sound Level Worksheets

Tulare County
VRPA Technologies, Inc.

27 June 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Cutler-Orosi CPU
RUN: Existing Conditions
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier Ldn		Increase over existing		Type Impact	With Barrier Calculated Ldn	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	59.8	70	59.8	10	----	59.8	0.0	8	-8.0
Receiver2	2	1	0.0	55.9	70	55.9	10	----	55.9	0.0	8	-8.0
Receiver3	3	1	0.0	60.2	70	60.2	10	----	60.2	0.0	8	-8.0
Receiver4	4	1	0.0	60.3	70	60.3	10	----	60.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Tulare County
VRPA Technologies, Inc.

27 June 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Cutler-Orosi CPU
RUN: Future Year 2040 No Build Conditions
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier Ldn Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Ldn	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	61.6	70	61.6	10	----	61.6	0.0	8	-8.0
Receiver2	2	1	0.0	57.8	70	57.8	10	----	57.8	0.0	8	-8.0
Receiver3	3	1	0.0	62.1	70	62.1	10	----	62.1	0.0	8	-8.0
Receiver4	4	1	0.0	62.1	70	62.1	10	----	62.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Tulare County
VRPA Technologies, Inc.

27 June 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Cutler-Orosi CPU
RUN: Future Year 2040 Build Conditions
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier Ldn Calculated	No Barrier Ldn Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Ldn	With Barrier Noise Reduction Calculated	With Barrier Noise Reduction Goal	With Barrier Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	61.9	70	61.9	10	----	61.9	0.0	8	-8.0
Receiver2	2	1	0.0	58.0	70	58.0	10	----	58.0	0.0	8	-8.0
Receiver3	3	1	0.0	62.4	70	62.4	10	----	62.4	0.0	8	-8.0
Receiver4	4	1	0.0	62.4	70	62.4	10	----	62.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix “F”

Traffic Impact Study Report

Cutler-Orosi Community Plan Update

Transportation Impact Study Report
June 2021

Prepared for:
Tulare County RMA
5961 South Mooney Boulevard
Visalia, California 93277

Prepared by:
VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722
Project Manager: Jason Ellard

Cutler-Orosi Community Plan Update Traffic Impact Study

Study Team

- ✓ Georgiena Vivian, President, VRPA Technologies, Inc., gvivian@vrpatechnologies.com, (559) 259-9257
- ✓ Erik Ruehr, Dir. of Traffic Engineering, VRPA Technologies, Inc., eruehr@vrpatechnologies.com, (858) 566-1766
- ✓ Jason Ellard, Transportation Engineer, VRPA Technologies, Inc., jellard@vrpatechnologies.com, (559) 271-1200

Table of Contents

Appendices

List of Tables

List of Figures

Executive Summary

This Transportation Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the Cutler-Orosi Community Plan Update. The TIS will provide a policy framework to address potential traffic impacts encountered in the planning process. The TIS shall be used as a guide for establishing land use patterns that minimize traffic impacts on the community and shall include measures and solutions to address existing and foreseeable traffic conflicts.

The Cutler-Orosi Community lies within the central portion of the San Joaquin Valley. The communities are located on the Valley floor at an elevation of approximately 366 feet above sea level with the surrounding area mostly flat. The transportation system within the planning area includes State Route (SR) 63 and 201 in addition to several County routes and a grid of local streets. The Cutler-Orosi Community is located approximately 13 miles north of the City of Visalia and 18 miles east of the City of Selma.

IMPROVEMENTS

Intersections

Table E-1 shows the anticipated level of service conditions at study intersections for the Future Year 2040 scenarios. Results of the analysis show that two (2) of the study intersections will exceed level of service standards under the Future Year 2040 No Build scenario and three (3) of the study intersections will exceed level of service standards under the Future Year 2040 Plus Build scenarios. The improvement projects listed below will alleviate level of service deficiencies at study intersections for all Future Year 2040 scenarios. Results of the analysis show that all of the study intersections and roadway segments will meet Tulare County's LOS "D" criteria and Caltrans' LOS "C" criteria through the year 2040 with the development of specific roadway improvements.

Segments

Table E-2 shows the anticipated level of service conditions at study roadway segments for the Future Year 2040 scenarios. Results of the analysis show that all of the study roadway segments will meet the applicable level of service standards. As a result, no roadway segment improvements are warranted.

Table E-1
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
				DELAY	LOS	DELAY	LOS
1. Road 128 / Avenue 422	Two-Way Stop Sign	C	AM	19.3	C	21.4	C
			PM	12.3	B	12.7	B
2. Road 128 / Avenue 419	Two-Way Stop Sign	C	AM	**>300.0 ***	**F ++**	**>300.0 ***	**F ++**
			PM	**38.5**	**E**	**48.8**	**E**
3. Road 128 / Avenue 416	Signalized	C	AM	29.9	C	**37.0**	**D**
			PM	23.8	C	25.9	C
4. Road 128 / Avenue 413	Signalized	C	AM	17.8	B	18.9	B
			PM	16.6	B	17.4	B
5. Road 128 / Avenue 408	Signalized	C	AM	20.8	C	22.3	C
			PM	20.8	C	22.1	C
6. Road 128 / Avenue 400	Two-Way Stop Sign	C	AM	**30.0**	**D**	**34.7**	**D**
			PM	**208.8**	**F ++**	**>300.0 ***	**F ++**

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized controlled intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.

* Delay exceeds 300 seconds

++ Meets Peak Hour Signal Warrant

Table E-2
Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	PEAK HOUR	FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
				VOLUME	LOS	VOLUME	LOS
1. Road 128 (SR 63)							
Avenue 422 to Avenue 419	2 Lanes Undivided	C	AM	1183	C	1248	C
			PM	810	B	855	B
Avenue 419 to Avenue 416	4 Lanes Undivided	C	AM	1586	C	1674	C
			PM	1228	C	1295	C
Avenue 416 to Avenue 413	4 Lanes Undivided	C	AM	1793	C	1893	C
			PM	1662	C	1754	C
Avenue 413 to Avenue 408	4 Lanes Undivided	C	AM	1852	C	1955	C
			PM	1753	C	1850	C
Avenue 408 to Avenue 400	4 Lanes Undivided	C	AM	1832	C	1933	C
			PM	1783	C	1881	C

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

CEQA Environmental Checklist

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. Implementation of the Cutler-Orosi Community Plan Update would result in a significant impact if it would:

- ✓ Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact After Mitigation **-** The proposed Cutler-Orosi Community Plan Update traffic analysis provides a policy framework to address potential traffic impacts encountered in the planning process. Results of the traffic analysis shows that the Cutler-Orosi Community Plan Update is in harmony with both the Tulare County General Plan and the TCAG Regional Transportation Plan. The General Plan currently calls for all intersections and roadway segments to be maintained at LOS "D" or better; this objective would be obtained given implementation of the Community Plan and the specific roadway improvements noted below. The Cutler-Orosi Community Plan also meets Caltrans' acceptable level of service criteria in the study area with the development of specific roadway improvements noted below. As a result, the Cutler-Orosi Community Plan Update will not conflict with a program, plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Described below are recommended improvements at study area intersections and segments for the Future Year 2040 scenarios that address future transportation and circulation issues in the Cutler-Orosi community. The improvements identified would result in acceptable levels of service as shown in Table E-3.

4.1.1 *Intersections*

- ✓ <u>Future Year 2040 No Build Scenario</u>

  Road 128 / Avenue 419
  - Install Traffic Signal

  Road 128 / Avenue 400
  - Install Traffic Signal

- ✓ <u>Future Year 2040 Plus Build Scenario</u>

  Road 128 / Avenue 419
  - See MM TR-1

Road 128 / Avenue 416

- Widen the westbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 left turn lane)

Road 128 / Avenue 400

- See MM TR-2

Table E-3
Intersection Operations with Improvements

INTERSECTION	TARGET LOS	PEAK HOUR	CUMULATIVE YEAR 2040 NO BUILD		CUMULATIVE YEAR 2040 PLUS BUILD	
			DELAY	LOS	DELAY	LOS
2. Road 128 / Avenue 419	C	AM	7.0	A	7.5	A
		PM	5.8	A	6.0	A
3. Road 128 / Avenue 416	C	AM			29.9	C
		PM			31.9	C
6. Road 128 / Avenue 400	C	AM	8.8	A	8.9	A
		PM	10.9	B	11.3	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

✓ Would the project exceed the applicable vehicle miles traveled (VMT) significance threshold?

Less Than Significant Impact – In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. Upon its incorporation into CEQA in 2019, this legislation changed the way that transportation studies are conducted for environmental documents. Delay-based metrics such as roadway capacity and level of service are no longer the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, the new performance measures is vehicle miles travelled (VMT).

July 1, 2020 was the statewide implementation date for SB 743. In August of 2020, Tulare County prepared SB 743 Guidelines and established a significance threshold for Community Plan Updates and other types of projects. The applicable significance threshold for Community Plan Updates is VMT/capita in the horizon year that exceeds VMT/capita for existing conditions. The analysis described in Chapter 5 concludes that the project will not exceed this threshold.

As a result, the Project will not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

- ✓ Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (eg., farm equipment)?

Less Than Significant Impact **-** The Cutler-Orosi Community Plan Update would not result in hazards due to design features, since all proposed improvements would be built to County and Caltrans design standards. The proposed Community Plan land uses would not increase the use of farm equipment on streets and roads in the Cutler-Orosi Community. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is needed.

- ✓ Result in inadequate emergency access?

Less Than Significant Impact **-** The Cutler-Orosi Community Plan Update would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the study intersections and roadway segments will meet acceptable levels of service with the development of specific roadway improvements. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed.

This Transportation Impact Study (TIS) has been prepared for the purpose of analyzing traffic conditions related to the Cutler-Orosi Community Plan Update. The TIS will provide a policy framework to address potential traffic impacts encountered in the planning process. The TIS shall be used as a guide for establishing land use patterns that minimize traffic impacts on the community and shall include measures and solutions to address existing and foreseeable traffic conflicts.

1.0 Introduction

1.1 Description of the Region/Project

The Cutler-Orosi Community lies within the central portion of the San Joaquin Valley. The communities are located on the Valley floor at an elevation of approximately 366 feet above sea level with the surrounding area mostly flat. Figure 1-1 shows the Cutler-Orosi community in the context of its region. The transportation system within the planning area includes State Route (SR) 63 and 201 in addition to several County routes and a grid of local streets as shown in Figure 1-2. The Cutler-Orosi Community is located approximately 13 miles north of the City of Visalia and 18 miles east of the City of Selma.

1.1.1 *Study Area*

The following intersections and adjoining roadway segments included in this TIS were determined in consultation with Tulare County Resource Management Agency (RMA) and California Department of Transportation (Caltrans) staff and include:

Intersections

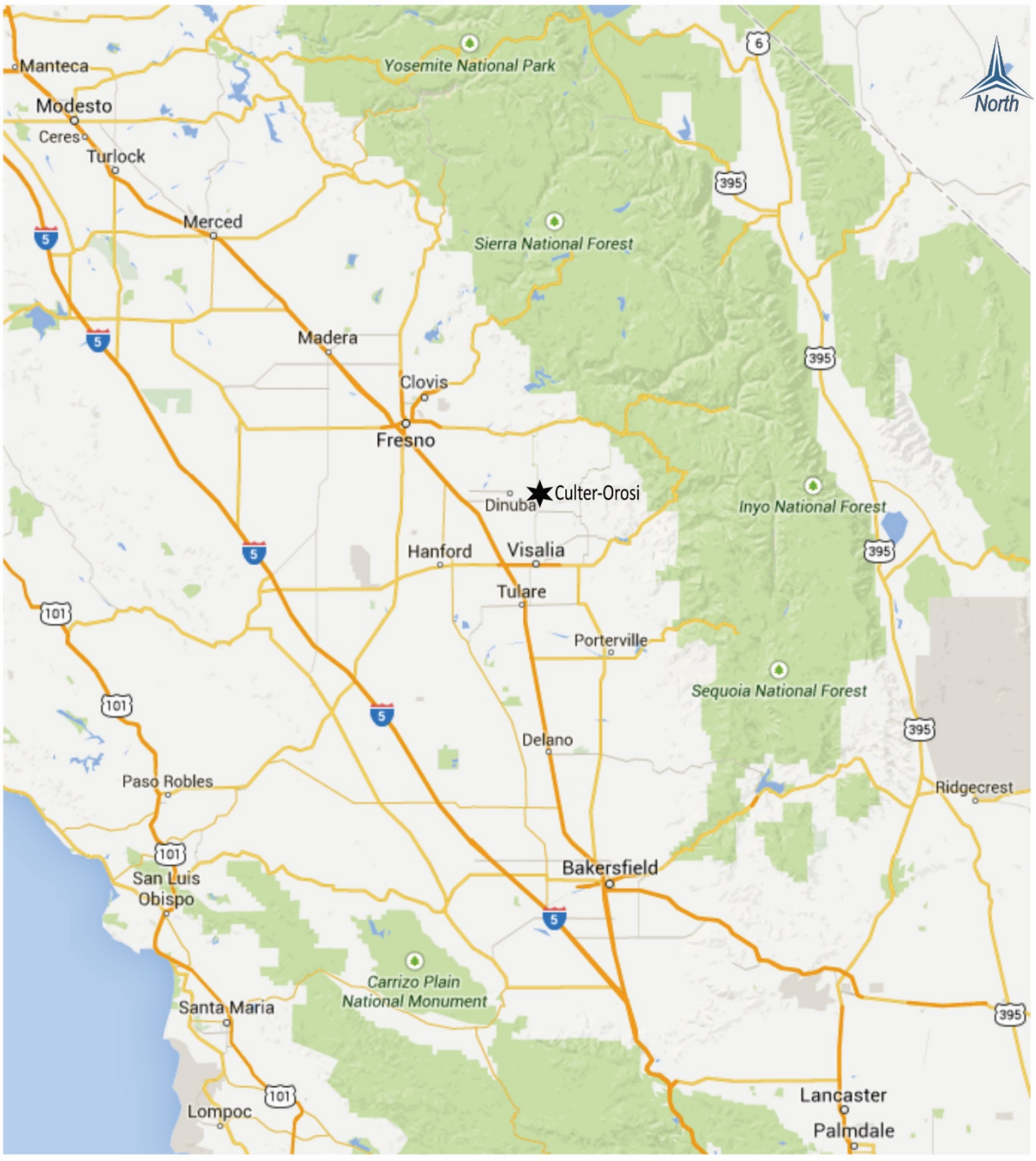
1. Road 128 (SR 63) at Avenue 422
2. Road 128 (SR 63) at Avenue 419
3. Road 128 (SR 63) at Avenue 416
4. Road 128 (SR 63) at Avenue 413
5. Road 128 (SR 63) at Avenue 408
6. Road 128 (SR 63) at Avenue 400 (SR 201)

Roadway Segments

1. Road 128 (SR 63):
   - Avenue 422 to Avenue 419
   - Avenue 419 to Avenue 416
   - Avenue 416 to Avenue 413
   - Avenue 413 to Avenue 408
   - Avenue 408 to Avenue 400 (SR 201)

Cutler-Orosi Community Plan Update
Regional Location

Figure 1-1



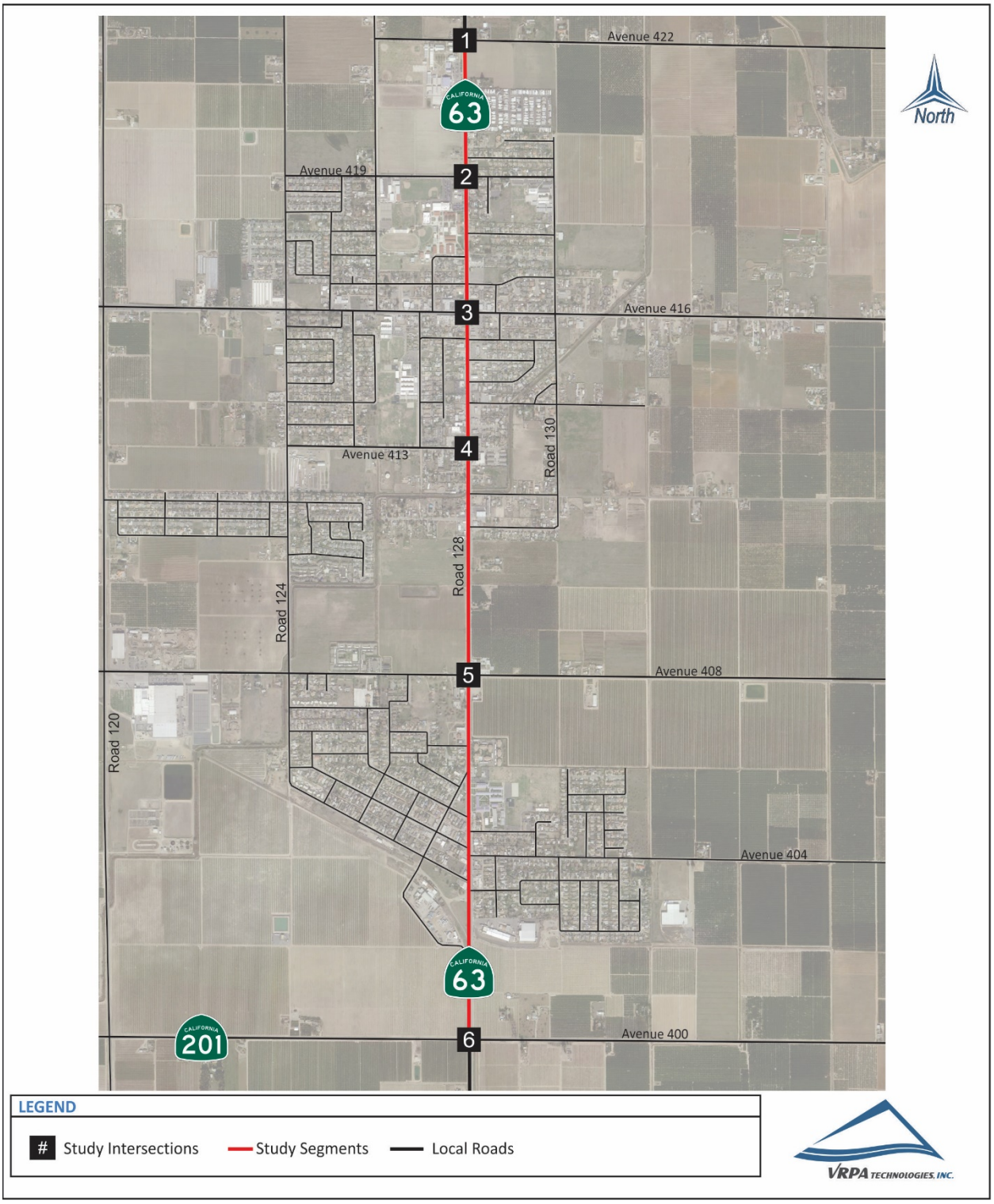
LEGEND

★ Project Location

VRPA TECHNOLOGIES, INC.

Cutler-Orosi Community Plan Update
Study Area

Figure 1-2



1.1.2 *Study Scenarios*

The TIS completed for the proposed Project includes level of service (LOS) analysis for the following traffic scenarios:

- ✓ Existing Year 2018 Conditions
- ✓ Future Year 2040 No Build Conditions
- ✓ Future Year 2040 Plus Build Conditions

1.2 Methodology

When preparing a TIS, guidelines set by affected agencies are followed. In analyzing street and intersection capacities the Level of Service (LOS) methodologies are applied. LOS standards are applied by transportation agencies to quantitatively assess a street and highway system's performance. In addition, safety concerns are analyzed to determine the need for appropriate mitigation resulting from increased traffic near sensitive uses and other evaluations such as the need for signalized intersections or other improvements.

1.2.1 *Intersection Analysis*

Intersection LOS analysis was conducted using the Synchro 10 software program. Synchro 10 supports the Highway Capacity Manual (HCM) 6th Edition methodologies and is an accepted program by Tulare County staff for assessment of traffic impacts. Levels of Service can be determined for both signalized and unsignalized intersections.

Tables 1-1 and 1-2 indicate the ranges in the amounts of average delay for a vehicle at signalized and unsignalized intersections for the various levels of service ranging from LOS "A" to "F". LOS "A" represents the best operating conditions and LOS "F" represents the worst operating conditions. For signalized intersections, LOS operations are based on an intersection's average control delay expressed in seconds per vehicle. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 1-1.

At two-way or one-way stop-controlled intersections, LOS is calculated for each controlled movement in addition to the overall LOS of the entire intersection. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

The signalized LOS standards applied to calculate intersection LOS are in accordance with the current edition of the HCM. Intersection turning movement counts and roadway geometrics used to develop LOS calculations were obtained from field review findings and count data provided from the traffic count sources identified in Section 2.1.

Table 1-1
Signalized Intersections
Level of Service Definitions
(Highway Capacity Manual)

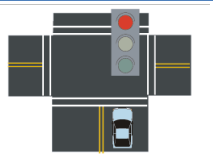
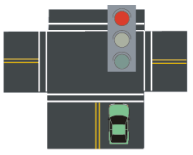
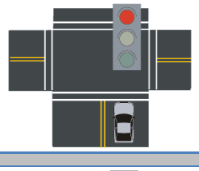
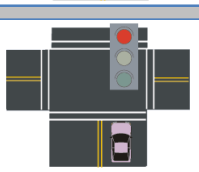
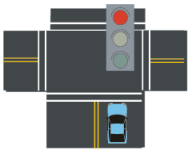
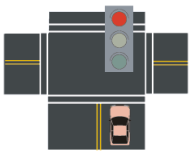
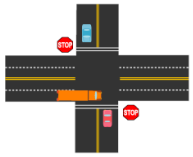
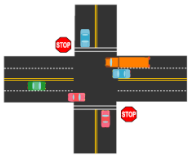
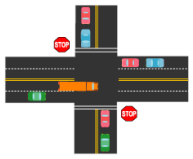
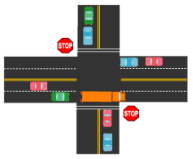
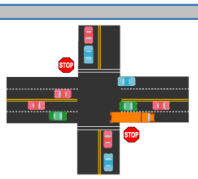
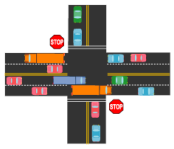
LEVEL OF SERVICE	DEFINITION		AVERAGE TOTAL DELAY (sec/veh)
A	Describes operations with very low delay. This level of service occurs when there is no conflicting traffic for a minor street.		≤ 10.0
B	Describes operations with moderately low delay. This level generally occurs with a small amount of conflicting traffic causing higher levels of average delay.		> 10.0 - 20.0
C	Describes operations with average delays. These higher delays may result from a moderate amount of minor street traffic. Queues begin to get longer.		> 20.0 - 35.0
D	Describes a crowded operation, with below average delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from shorter gaps on the mainline and an increase of minor street traffic. The queues of vehicles are increasing.		> 35.0 - 55.0
E	Describes operations at or near capacity. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor gaps for the minor street to cross and large queues.		> 55.0 - 80.0
F	Describes operations that are at the failure point. This level, considered to be unacceptable to most drivers, often occurs with over- saturation, that is, when arrival flow rates exceed the capacity of the intersection. Insufficient gaps of suitable size exist to allow minor traffic to cross the intersection safely.		> 80.0

Table 1-2
Unsignalized Intersections
Level of Service Definitions
(Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	No delay for stop-controlled approaches. 	0 - 10.0
B	Describes operations with minor delay. 	> 10.0 - 15.0
C	Describes operations with moderate delays. 	> 15.0 - 25.0
D	Describes operations with some delays. 	> 25.0 - 35.0
E	Describes operations with high delays and long queues. 	> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers. 	> 50.0

When an unsignalized intersection does not meet acceptable LOS standards, the investigation of the need for a traffic signal shall be evaluated. The latest edition of the California Manual on Uniform Traffic Control Devices (California MUTCD) introduces standards for determining the need for traffic signals. The California MUTCD indicates that the satisfaction of one or more traffic signal warrants does not in itself require the installation of a traffic signal. In addition to the warrant analysis, an engineering study of the current or expected traffic conditions should be conducted to determine whether the installation of a traffic signal is justified. The California MUTCD Peak Hour Warrant (Warrant 3) will be used, as necessary, to determine if a traffic signal is warranted at unsignalized intersections that fall below current LOS standards.

1.2.2 *Roadway Segment Analysis*

According to the HCM, LOS is categorized by two parameters of traffic: uninterrupted and interrupted flow. Uninterrupted flow facilities do not have fixed elements such as traffic signals that cause interruptions in traffic flow. Interrupted flow facilities do have fixed elements that cause an interruption in the flow of traffic, such as stop signs and signalized intersections along arterial roads. A roadway segment is defined as a stretch of roadway generally located between signalized or controlled intersections.

Segment LOS is important in order to understand whether the capacity of a roadway can accommodate future traffic volumes. Table 1-3 provides a definition of segment LOS. The performance criteria used for evaluating volumes and capacities on the road and highway system for this study were estimated using the Modified HCM-Based LOS Tables (Florida Tables). The tables consider the capacity of individual road and highway segments based on numerous roadway variables (design speed, passing opportunities, signalized intersections per mile, number of lanes, saturation flow, etc.). These variables were identified and applied to reflect segment LOS conditions. Street segment capacity was determined using information shown in Table 1-4, which comes from the Modified Arterial Level of Service Tables included in Appendix A.

1.3 Policies to Maintain Level of Service

An important goal is to maintain acceptable levels of service along the highway, street, and road network. To accomplish this, Tulare County and Caltrans adopt minimum levels of service in an attempt to control congestion that may result as new development occurs.

Tulare County's 2030 General Plan, policy number TC-1.16, identifies a minimum LOS standard of "D" on the County roadway system (both segments and intersections).

Based on guidance from Caltrans, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and

recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadways segments, and intersections is "D". For undeveloped or not densely developed locations, the goal may be to achieve LOS "C".

Given the LOS standards of the various agencies in the Project area, the goal of the Project is to provide LOS results that meet the minimum LOS "C" for Caltrans facilities and LOS "D" for County facilities for all intersections and segments.

Table 1-3
Roadway Segment
Level of Service Definitions
(Highway Capacity Manual)

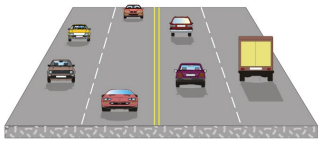
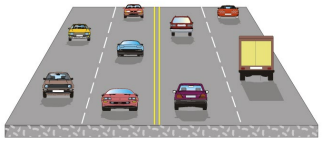
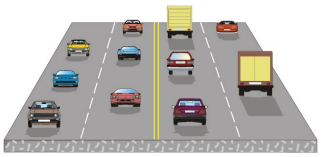
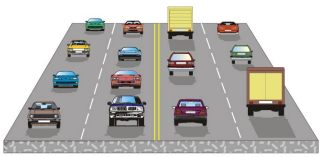
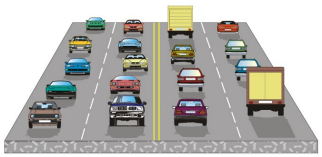
LEVEL OF SERVICE	DEFINITION	
A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.	
B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.	
C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.	
D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.	
E	Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.	
F	Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point where the amount of traffic exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.	

Table 1-4
Peak Hour Two-Way Volumes Urbanized Areas

Level of Service					
Lanes	Divided	B	C	D	E
UNINTERRUPTED FLOW FACILITIES					
Freeways					
4	Divided	4,560	6,200	7,690	7,870
6	Divided	6,650	9,150	11,350	11,820
8	Divided	8,760	12,130	15,110	15,760
Highways					
2	Undivided	1,110	1,690	2,290	3,070
4	Divided	3,350	4,840	6,090	6,840
6	Divided	5,040	7,250	9,130	10,250
INTERRUPTED FLOW FACILITIES					
State Signalized Arterials					
2	Undivided	*	360	1,250	1,690
4	Divided	90	2,450	3,250	3,400
6	Divided	150	3,710	4,890	5,130
Non-State Signalized Roadways					
2	Undivided	*	324	1,125	1,521
2	Divided	*	342	1,188	1,606
4	Undivided	77	2,083	2,763	2,890
4	Divided	81	2,205	2,925	3,060
6	Divided	135	3,339	4,401	4,617

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.

2.0 Existing Conditions

2.1 Existing Traffic Counts and Roadway Geometrics

The first step toward assessing Project traffic impacts is to assess existing traffic conditions. Existing AM and PM peak hour turning movements were collected at each study intersection by National Data and Surveying Services. Intersection turning movement counts were conducted for the peak hour periods of 7:00-9:00 AM and 4:00-6:00 PM for all key intersections on Tuesday, November 27, 2018. Traffic count data worksheets are provided in Appendix B.

Existing lane geometry is shown in Figure 2-1. Existing (2018) AM and PM peak hour traffic volumes are shown in Figures 2-2 and 2-3.

2.2 Existing Functional Roadway Classification System

Functional classification is the process by which streets and highways are grouped into classes according to the type of service they provide. Streets and highways are classified according to their primary function and may be assigned into several basic classifications:

- ✓ **State Highways (which may be freeways, expressways or conventional highways)** – Connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas.

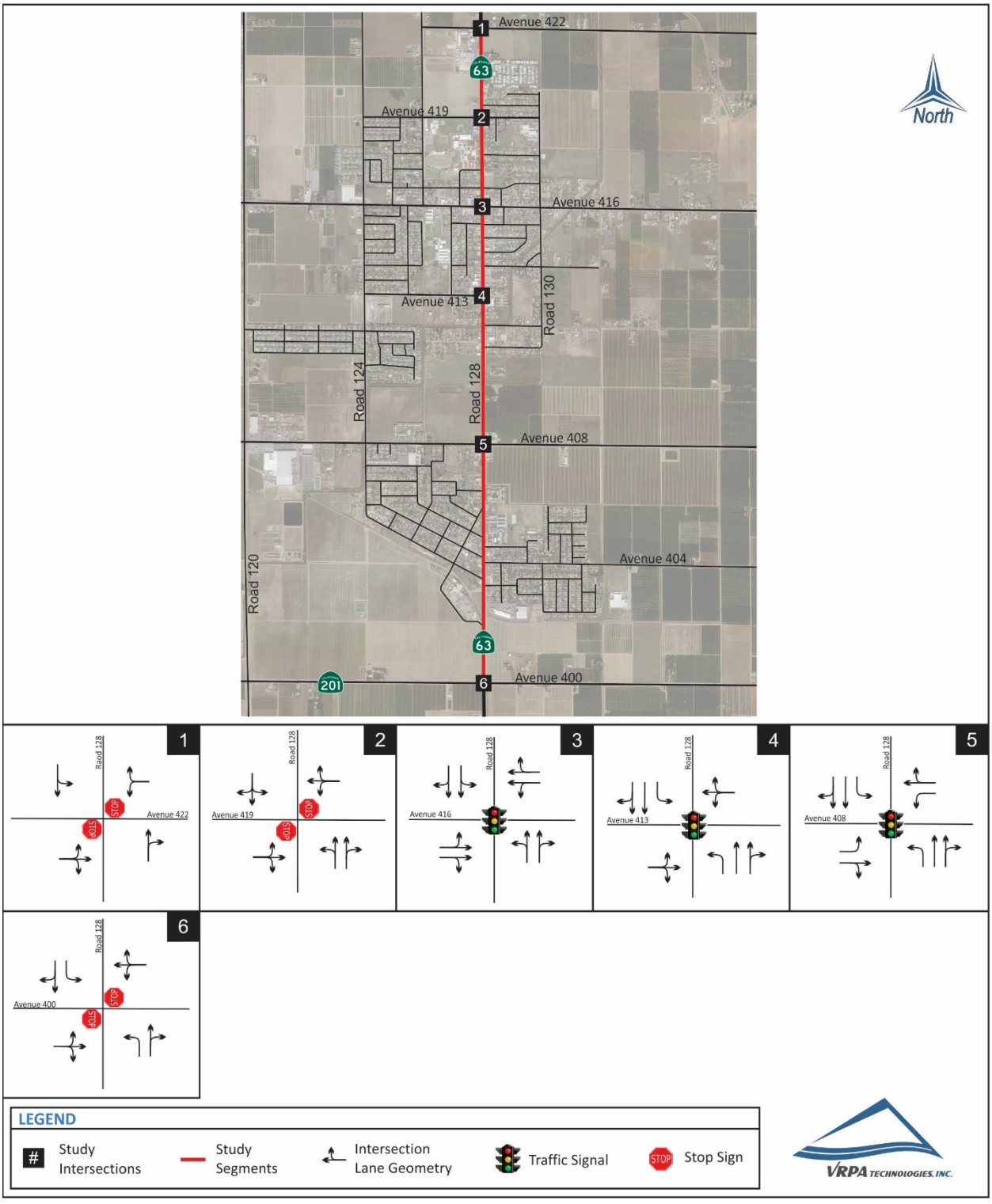
  State Route (SR) 63 is the principle state highway serving the Cutler-Orosi Community. SR 63 primarily exists as an undivided four-lane road without bike lanes throughout Cutler-Orosi Community. On-street parking is currently permitted on the four-lane segments. The posted speed limit is generally 35-40 mph throughout the community (except for school zones with a posted speed of 25 mph). The posted speed limit outside of these communities is generally 55 mph. According to Caltrans' website, the average annual daily traffic (AADT) along SR 63 in the study area was approximately 12,100 south of Avenue 416 and 7,300 south of Avenue 400 in 2017.

  SR 201-Avenue 400 (west of SR 63) – currently exists as an undivided two-lane road in the study area. The posted speed limit is generally 55 mph. According to Caltrans' website, the AADT along SR 201 in the study area was approximately 3,000 in 2017.

- ✓ **Arterials** – Serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.

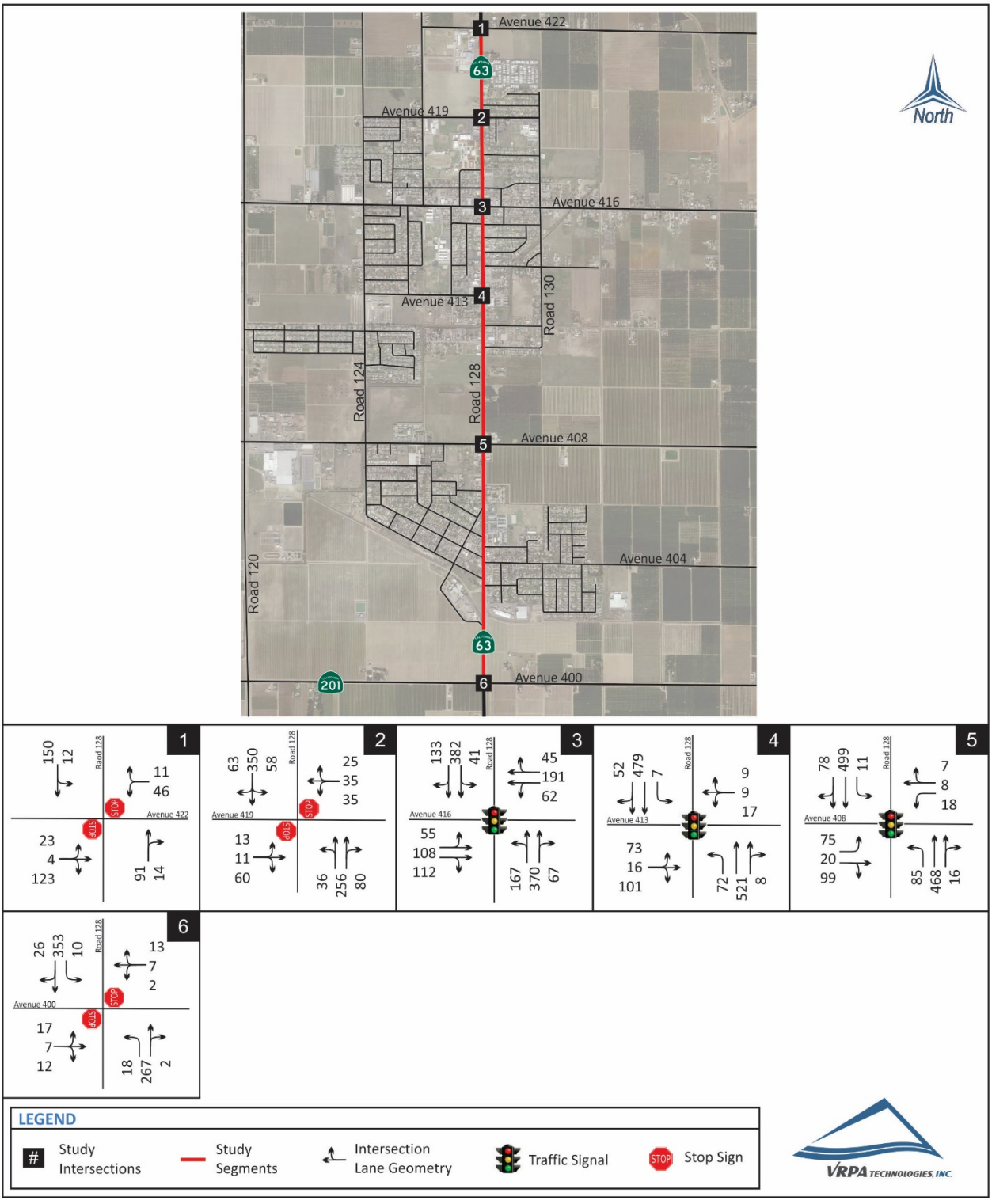
Cutler-Orosi Community Plan Update
Existing Lane Geometry

Figure 2-1



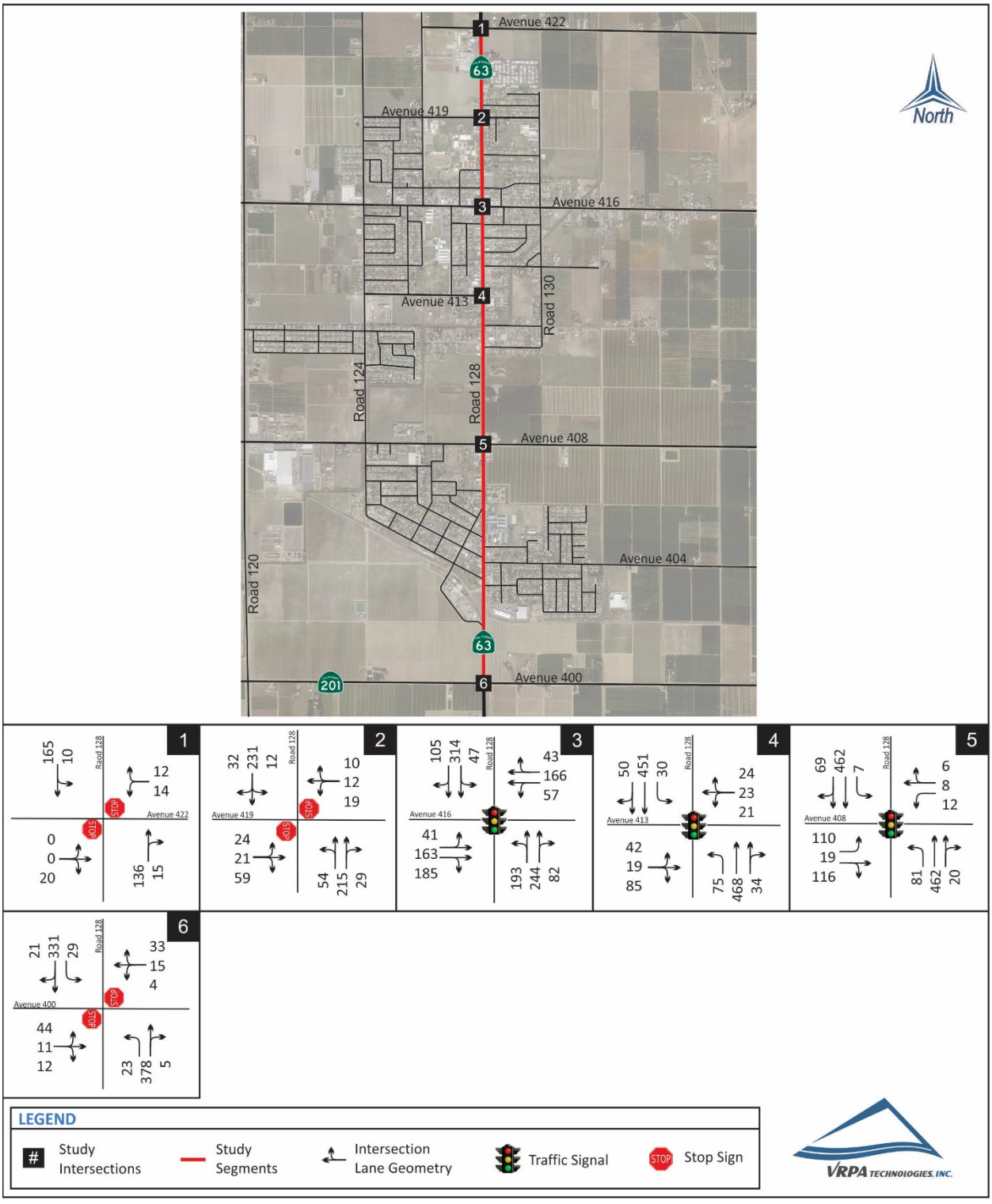
Cutler-Orosi Community Plan Update
Existing AM Peak Hour Traffic

Figure 2-2



Cutler-Orosi Community Plan Update
Existing PM Peak Hour Traffic

Figure 2-3



Avenue 416 (west of Road 130) – currently an undivided four-lane minor arterial without bike lanes, with a posted speed limit of 25 and 40 mph through the study area.

- ✓ **Collectors** – Provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers and limited direct access to abutting properties.

  Avenues 408, 413, 419, and 422 are classified as collector streets in the study area.

- ✓ **Local Streets** – Provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

In recent years the concept of "Complete Streets" has evolved. Under this concept, while streets may still carry a primary functional classification, the design of streets aims to allow all modes and trip purposes to be safely accommodated to the extent feasible and as warranted by local needs and conditions.

2.3 Affected Streets and Highways

Major street and highway intersections and segments in the Cutler - Orosi Communities were analyzed to determine levels of service utilizing HCM-based methodologies described previously. The study intersections and street and highway segments included in this TIS are listed below.

Intersections

1. Road 128 (SR 63) at Avenue 422
2. Road 128 (SR 63) at Avenue 419
3. Road 128 (SR 63) at Avenue 416
4. Road 128 (SR 63) at Avenue 413
5. Road 128 (SR 63) at Avenue 408
6. Road 128 (SR 63) at Avenue 400 (SR 201)

Roadway Segments

1. Road 128 (SR 63):
   - Avenue 422 to Avenue 419
   - Avenue 419 to Avenue 416
   - Avenue 416 to Avenue 413
   - Avenue 413 to Avenue 408
   - Avenue 408 to Avenue 400 (SR 201)

2.4 Level of Service

2.4.1 *Intersection Capacity Analysis*

All intersection LOS analyses were estimated using Synchro 10 Software. Various roadway geometrics, traffic volumes, and properties (peak hour factors, storage pocket length, etc.) were input into the Synchro 10 Software program in order to accurately determine the travel delay and LOS for each Study scenario. The intersection LOS and delays reported represent the 6th Edition HCM outputs.

Results of the analysis show that all of the study intersections are currently operating at acceptable levels of service. Table 2-1 shows the intersection LOS for the existing conditions. Synchro 10 (HCM 6th Edition) Worksheets are provided in Appendix C.

2.4.2 *Roadway Segment Capacity Analysis*

Results of the peak hour segment analysis along the existing street and highway system are reflected in Table 2-2. Roadway segment analysis was based on the Florida Department of Transportation, Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas, which are commonly utilized in the Central Valley. Results of the analysis show that all of the study roadway segments are currently operating at acceptable levels of service.

2.5 Queuing Analysis

Table 2-3 provides a queue length summary for the study intersections for the Existing scenario. Traffic queue lengths at an intersection or along a roadway segment assist in the determination of a roadways overall performance. Excessive queuing at an intersection increases vehicle delay and reduces capacity. If a dedicated left turn lane doesn't provide adequate storage, vehicles will queue beyond the left turn storage pocket and into other travel lanes, thus increasing vehicle delay and reducing capacity. The queuing analysis is based upon methodology presented in Chapter 400 of Caltrans' Highway Design Manual (HDM). Appendix D includes Chapter 400 of Caltrans' HDM. The queue results shown in Table 2-3 represent the approximate queue lengths for the respective lane movements.

Table 2-1
Existing Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	EXISTING	
				DELAY	LOS
1. Road 128 / Avenue 422	Two-Way Stop Sign	C	AM	17.0	C
			PM	10.6	B
2. Road 128 / Avenue 419	Two-Way Stop Sign	C	AM	**> 300.0**	**F ***
			PM	17.5	C
3. Road 128 / Avenue 416	Signalized	C	AM	25.7	C
			PM	21.5	C
4. Road 128 / Avenue 413	Signalized	C	AM	14.5	B
			PM	12.9	B
5. Road 128 / Avenue 408	Signalized	C	AM	17.1	B
			PM	16.9	B
6. Road 128 / Avenue 400	Two-Way Stop Sign	C	AM	18.7	C
			PM	**27.7**	**D +**

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized controlled intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.

* Delay exceeds 300 seconds

+ The existing LOS is 'D' or worse. The minimum LOS shall reflect existing conditoins for future study scenarios.

Table 2-2
Existing Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	PEAK HOUR	EXISTING	
				VOLUME	LOS
1. Road 128 (SR 63)					
Avenue 422 to Avenue 419	2 Lanes Undivided	C	AM	765	B
			PM	524	B
Avenue 419 to Avenue 416	4 Lanes Undivided	C	AM	1026	C
			PM	794	C
Avenue 416 to Avenue 413	4 Lanes Undivided	C	AM	1160	C
			PM	1075	C
Avenue 413 to Avenue 408	4 Lanes Undivided	C	AM	1198	C
			PM	1134	C
Avenue 408 to Avenue 400	4 Lanes Undivided	C	AM	1185	C
			PM	1153	C

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

Table 2-3
Existing Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		EXISTING CONDITIONS	
			AM Queue	PM Queue
4. Road 128 / Avenue 413	NB Left	100	60	63
	SB Left	100	6	25
5. Road 128 / Avenue 408	NB Left	200	71	68
	SB Left	200	9	6
	EB Left	300	63	92
	WB Left	300	15	10
6. Road 128 / Avenue 400	NB Left	275	15	19
	SB Left	100	8	24

Queue is measured in feet / **BOLD** denotes exceedance

2.6 Cutler-Orosi Community Collision Data

The Transportation Injury Mapping System (TIMS) provided by University of California, Berkeley was used to evaluate traffic collisions in the Cutler-Orosi Community along study segments. TIMS utilizes geocoded data provided by the Statewide Integrated Traffic Records System (SWITRS). SWITRS is a tool used by California Highway Patrol (CHP) and other Allied Agencies throughout California and includes various types of statistical reports and data. The database serves as a means to collect and process data gathered from a collision scene. Information from the TIMS database shows that approximately 97 injury or fatal accidents have occurred throughout the study area for the past 5 years. Table 2-4 provides a summary of the accidents reported in the Cutler-Orosi Community. Unsafe speed was the primary collision factor for 26.8% of the accidents reported. A graphical representation of traffic collisions throughout the Cutler-Orosi Community for the past 5 years is provided in Figure 2-4.

Table 2-4
Cutler-Orosi Community Collision Data (2013-2017)

TOTAL ACCIDENTS	FATAL ACCIDENTS	INJURY ACCIDENTS	PEDESTRIAN / BICYCLE RELATED ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PRIMARY COLLISION FACTOR (Top 3)			COLLISION TYPE (Top 3)		
						UNSAFE SPEED	AUTOMOBILE RIGHT OF WAY	UNDER THE INFLUENCE OF ALCOHOL OR DRUG	BROADSIDE	REAR END	VEHICLE / PEDESTRIAN
97	2	95	19	2	124	26.8%	25.8%	14.4%	36.1%	30.9%	11.3%

2.7 Public Transit and Active Transport Systems

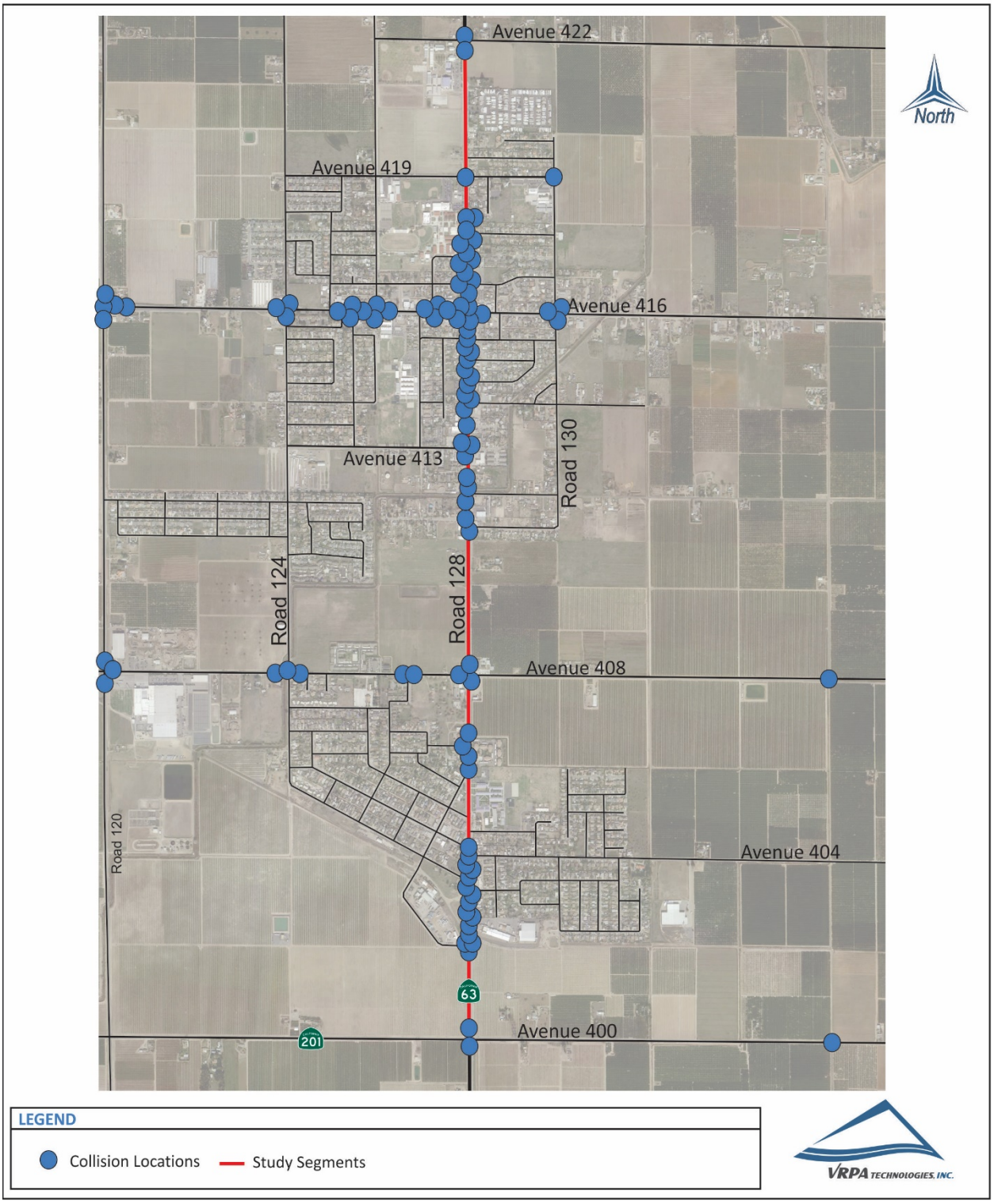
While the private automobile is the dominant mode of travel within Cutler-Orosi, as it is throughout Tulare County, other modes of transportation are important. The latest available Census survey data for Cutler-Orosi indicates that about 57 percent of commuters drive alone to work, while 43 percent use other means: 29 percent carpool or vanpool, 4 percent walked, 0 percent used public transportation and 1 percent worked at home.[1] The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips but tend to be less concentrated in peak traffic periods. Off-peak trips also tend to have a greater proportion of shared ride and active (walk and bike) trips.

While congestion is not a major issue in Cutler-Orosi, overreliance on automobiles creates other costs for both society and households and means that many in the communities who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycling and walking. The public transit system alternatives for Cutler-Orosi include fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services.

[1] Source: US Census 2012 5-year American Community Survey, via the ProximityOne.com website: http://proximityone.com/places12dp3.htm

Cutler-Orosi Community Plan Update
Collision Data (2013-2017)

Figure 2-4



Tulare County Area Transit (TCaT) Route 10 operates in Cutler-Orosi along Road 128 (SR 63). Route 10 provides 12 roundtrips to the Visalia Transit Center on weekdays and 4 roundtrips on weekends. Transfers can be made to connect to Visalia, Tulare, and the smaller cities and communities in the County served by TCaT and Visalia Transit fixed route transit systems. TCaT vehicles are wheelchair accessible and all full-size buses include bike racks.

Paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped.

Within Cutler-Orosi, TCaT provides a supplemental service to Fixed-Route service called Dial-A-Ride; a curb-to-curb para-transit service on a shared-ride / demand-response basis. TCaT's Dial-A-Ride service designed to provide paratransit service for ADA (Americans with Disabilities Act) certified individuals with disabilities that prevent them from riding the TCaT fixed-route buses. In addition, the Dial-A-Ride provides same day service to the general public (i.e., non-ADA-certified) passengers based on space availability. Services are operated on weekdays from 10:45 am – 12:30 pm and 2:15 pm – 4:30 pm.

The closest Greyhound intercity bus stop to Cutler-Orosi is in Visalia, approximately 16 miles south of the Cutler-Orosi Community. This Greyhound station can be accessed by Cutler-Orosi residents by TCaT Route 10.

2.8 AMTRAK

The Hanford AMTRAK station, located 25 miles west in Kings County, is the closest station to Cutler-Orosi providing passenger rail service; the Fresno Amtrak station is 30 miles to the northwest. The San Joaquin Joint Powers Authority (SJJPA) is comprised of ten agencies including TCAG. They currently oversee the operation of six trains daily serving each of these stations. Service is provided to points north including San Francisco and Sacramento and to points south including Bakersfield and Los Angeles.

2.9 High Speed Rail

The California High-Speed Rail Authority (HSRA) has determined that high-speed rail is technically, environmentally and economically feasible once constructed, and would be operationally self-sufficient. The Authority's purpose is to fund and construct the high-speed rail system throughout California. The proposed service would serve new stations in Fresno and Kings Counties near Tulare.

2.10 Aviation

Fresno Yosemite International Airport (FAT), 30 miles northwest of Cutler-Orosi, is the principal passenger airfreight airport in the central San Joaquin Valley. Visalia Municipal Airport, 11 miles southeast, offers passenger service to Los Angeles.

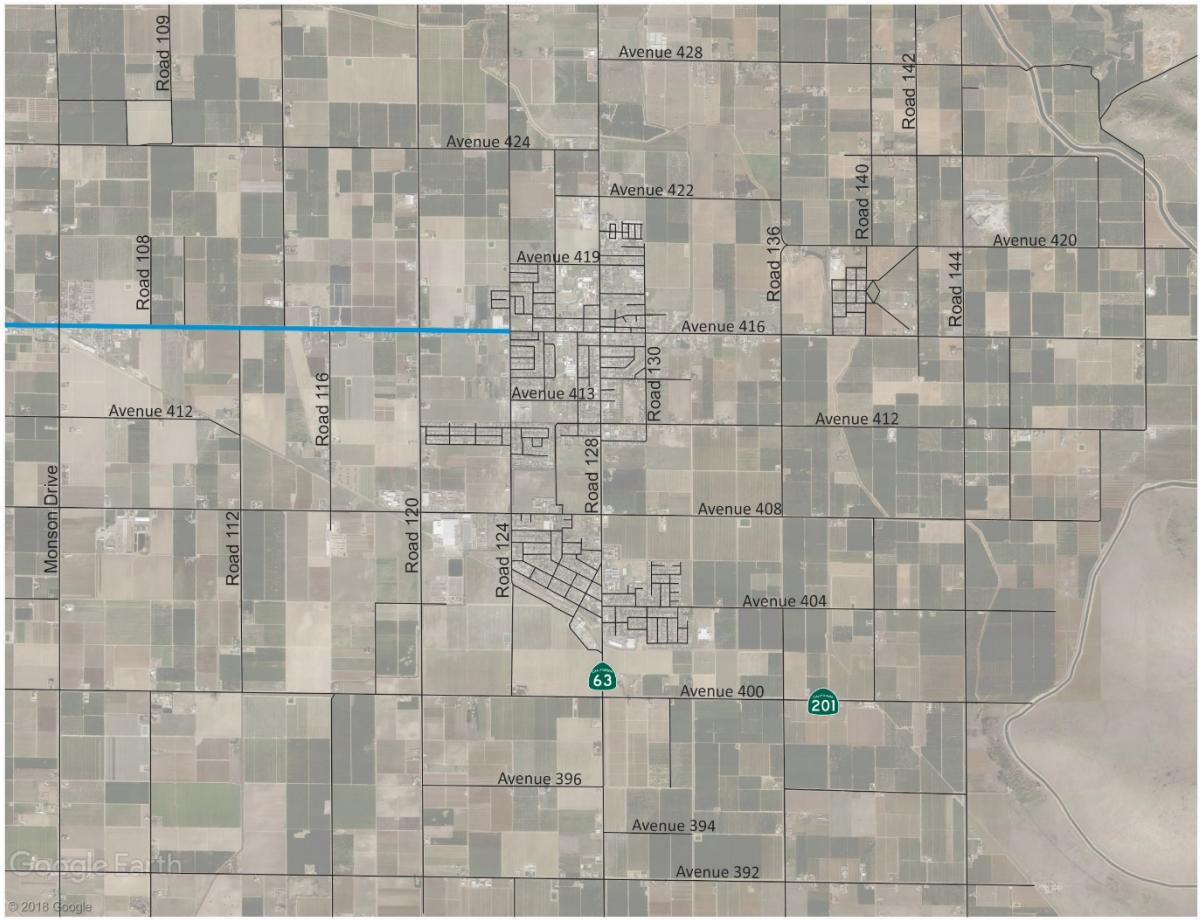
2.11 Bikeway and Pedestrian Facilities

Investment in bikeways provides an inexpensive environment-friendly transportation opportunity. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. While the numbers of cyclists are small in comparison to the amount of auto traffic, the size of the community of Cutler-Orosi means that most trips within the communities can be as fast by bicycle as by car. Figure 2-5 shows the existing bicycle facilities in the vicinity of the Culter-Orosi community. There is currently a Class II bike facility along Avenue 416 west of the city of Orosi.

Pedestrian facilities include sidewalks, walkways, crosswalks, signals, lighting, and benches, among other items. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities serving the school and recreational facilities enhance the safety of those who choose to walk to and from these destinations.

Cutler-Orosi Community Plan Update
Existing Bike Facilities in the Cutler-Orosi Area

Figure 2-5



LEGEND

— Class II bike facility

VRPA TECHNOLOGIES, INC.

3.0 Traffic Impacts and Circulation Analysis

This chapter provides an assessment of the anticipated traffic as it relates to the Cutler-Orosi Community Land Use Plan (Figure 3-1) and the impact of that traffic on the surrounding street system.

3.1 Future Year Traffic Forecasts

To assess the impacts that the Cutler-Orosi Community Land Use Plan may have on the surrounding street and highway segments and intersections, the first step is to evaluate the variation in future year traffic model growth and the historic population growth within the community. The levels of traffic expected in the year 2040 relate to the cumulative effect of traffic increases resulting from the implementation of the General/Community Plans of local agencies. Traffic forecasts in the Cutler-Orosi Community area for Future Year 2040 were provided by Tulare County Association of Government (TCAG) staff. TCAG manages public transportation, biking, streets, highways, air quality, rail, Measure R, congestion, and infrastructure plans & funding in Tulare County.

3.1.1 *Future Year 2040 No Build*

To project future traffic roadway conditions in the year 2040 considering the current Cutler-Orosi Community land use plan, a variety of sources were used. TCAG's Future Year 2040 model exhibited a growth rate of approximately 1.5% in the study area. Traffic projections in Caltrans' SR 63 and SR 210 Transportation Concept Report (TCR) displayed a growth rate of approximately 1.75% and 2.66% in the study area, respectively. Historical growth in the unincorporated portion of Tulare County is approximately 1.3% based on population trends as forecasted in the Tulare County General Plan 2030 Update. Cutler-Orosi census data shows that the population has not increased since the year 2010. A growth rate of 2.0% is consistent with the overall growth in the study area and was used to evaluate Future Year 2040 No Build conditions.

The Future Year 2040 No Build traffic, resulting from the process described above, is shown in Figures 3-2 and 3-3.

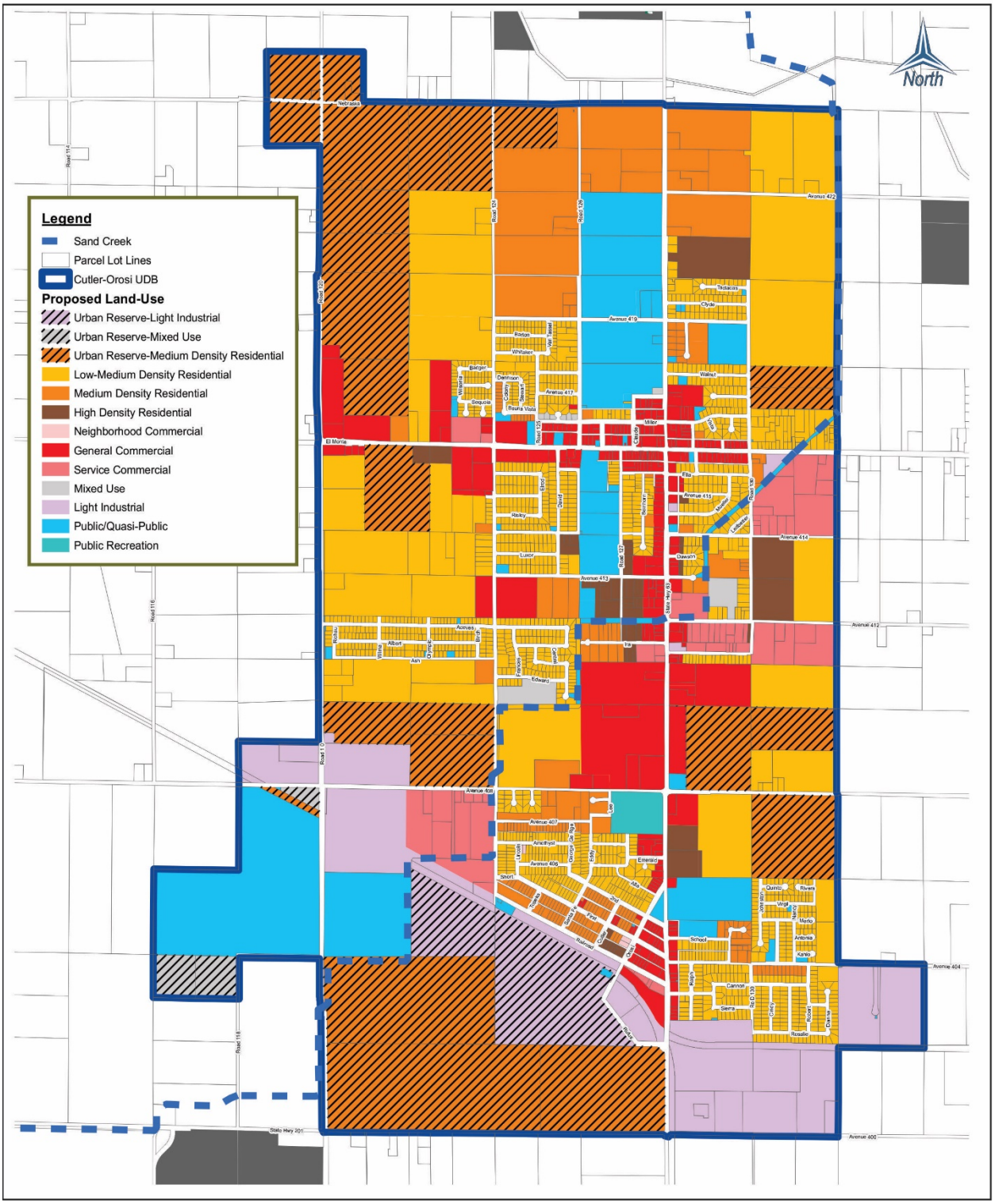
3.1.2 *Future Year 2040 Plus Build*

The net area increase in the urban development boundary is 712.1 acres when comparing the proposed Urban Development boundary and the Existing boundary. While this represents a 30% increase in Urban Development boundary, historical growth in and around the Cutler-Orosi Community will primarily remain constant. A growth rate of 2.25% was used to estimate the overall growth in the study area considering the proposed Land Use for the Cutler-Orosi Community given the increase in the Urban Development boundary.

The Future Year 2040 Build traffic, resulting from the process described above, is shown in Figures 3-4 and 3-5.

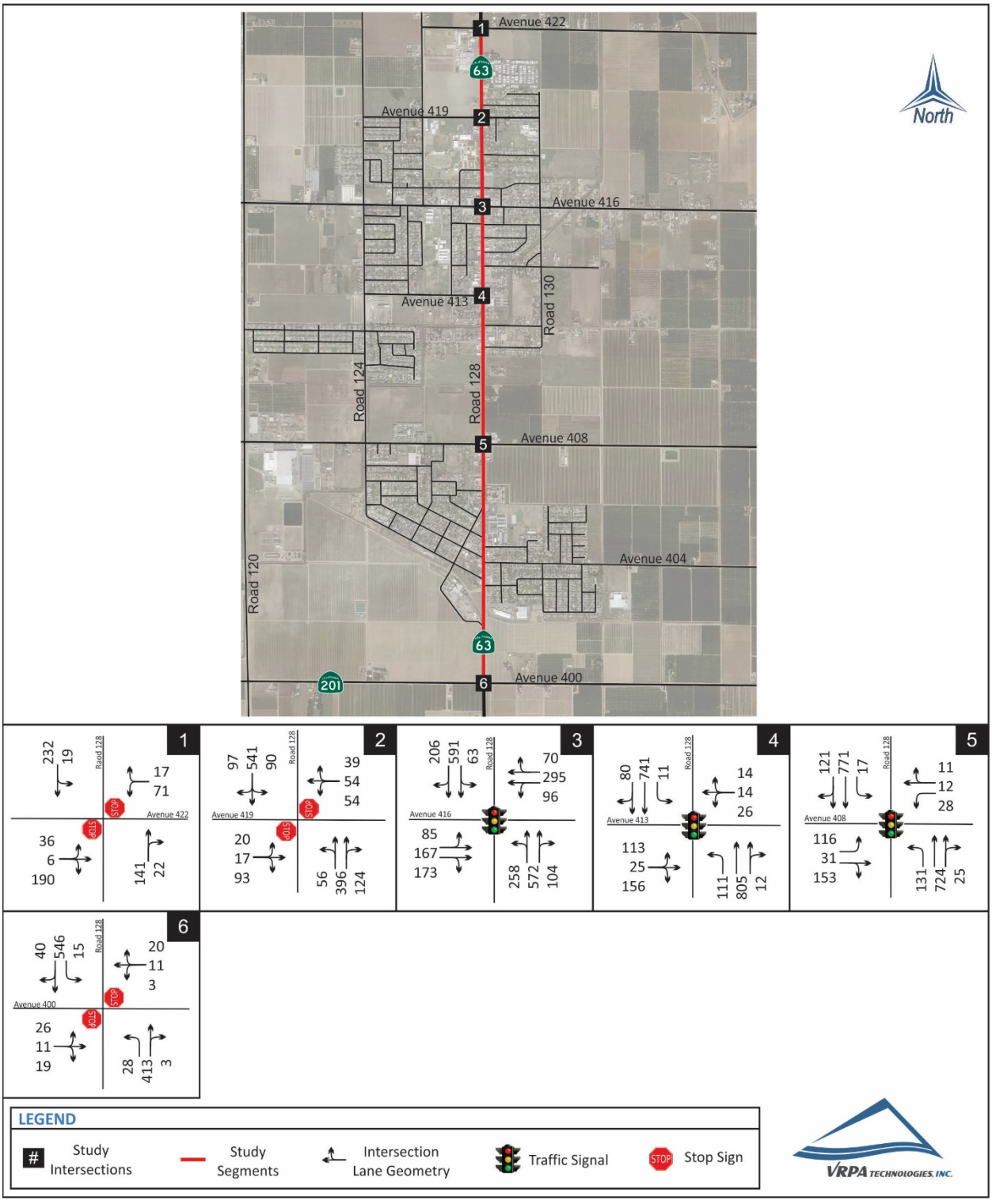
Cutler-Orosi Community Plan Update
Proposed Land Use

Figure 3-1



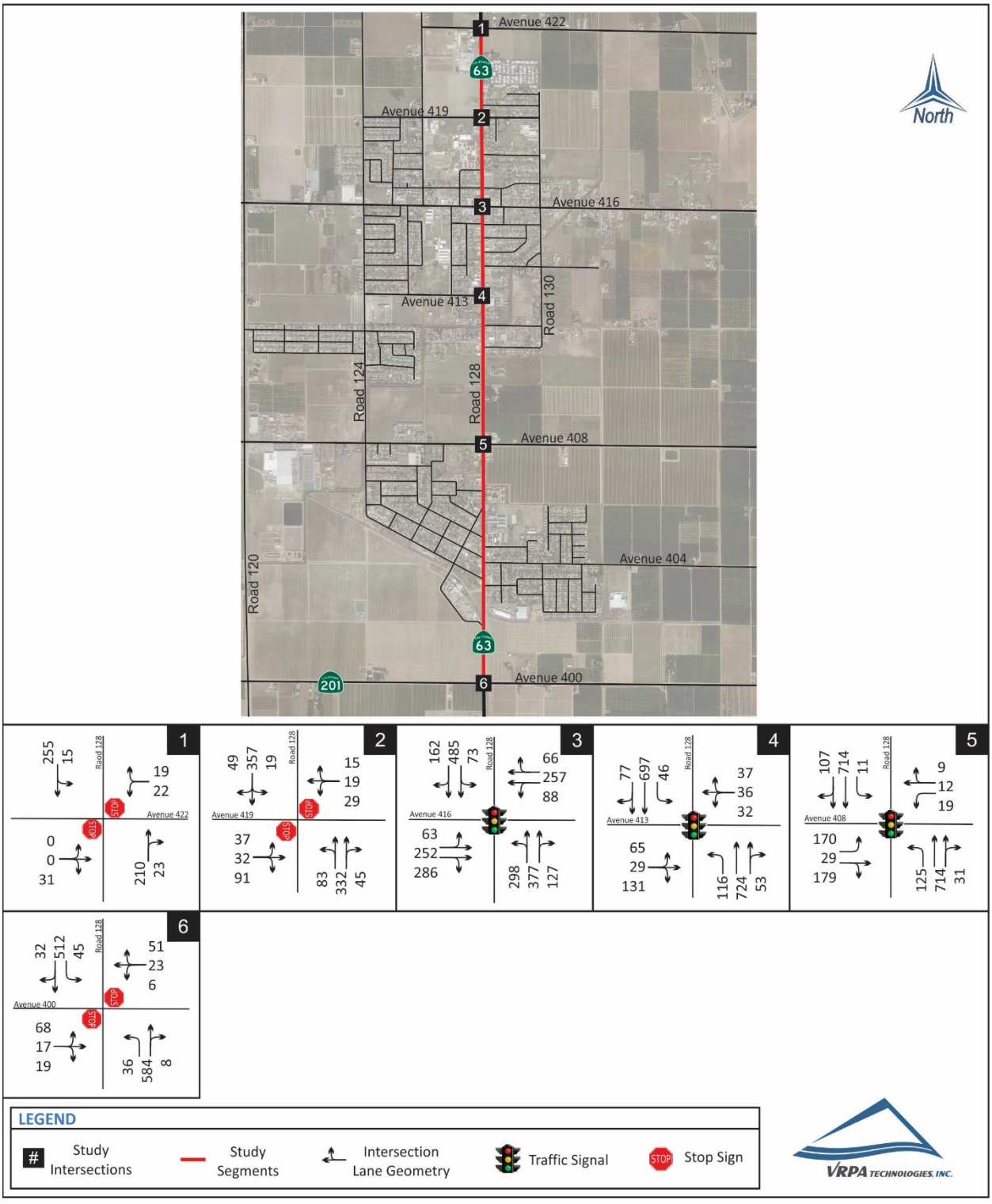
Cutler-Orosi Community Plan Update
Future Year 2040 No Build AM Peak Hour Traffic

Figure 3-2



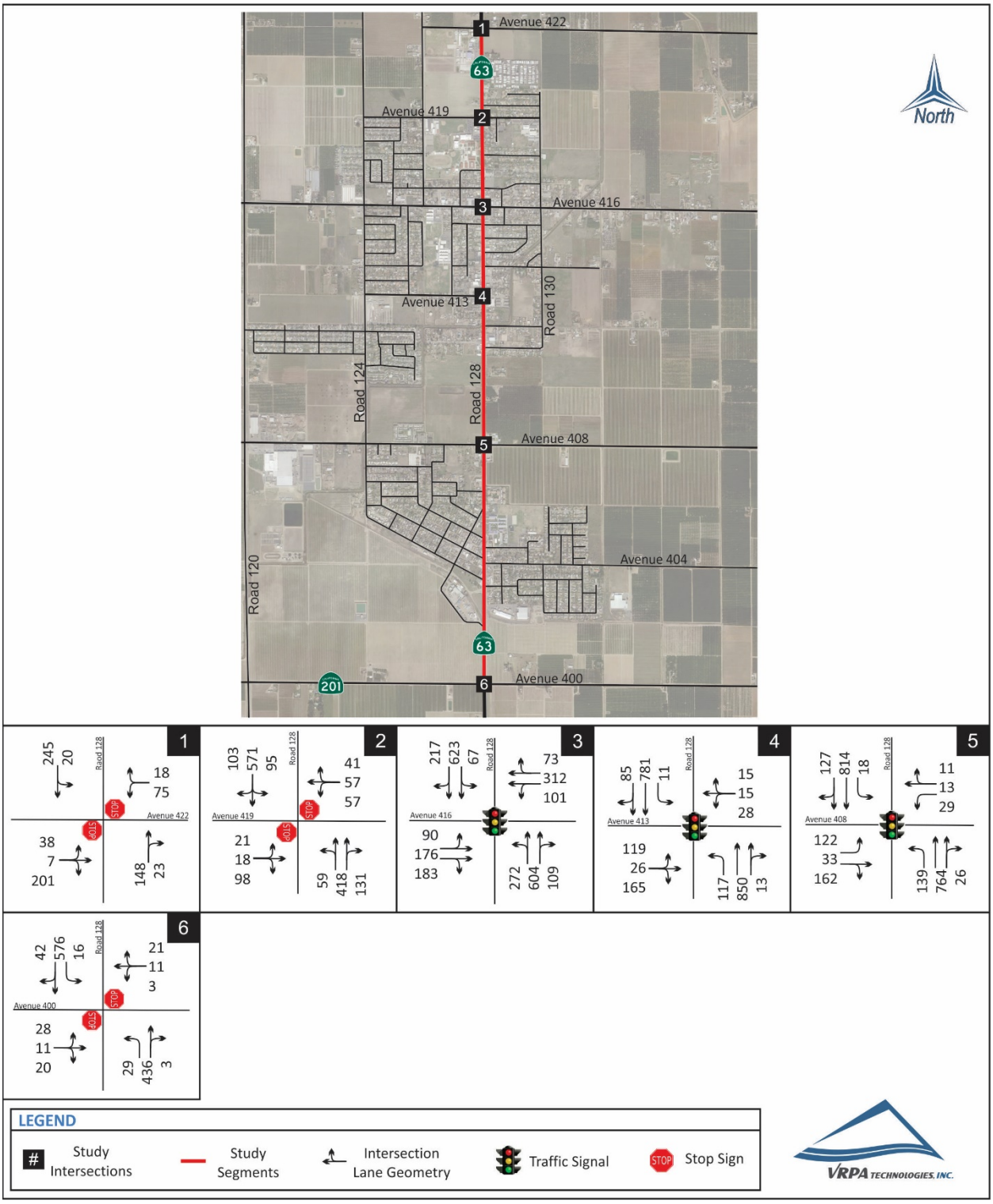
Cutler-Orosi Community Plan Update
Future Year 2040 No Build PM Peak Hour Traffic

Figure 3-3



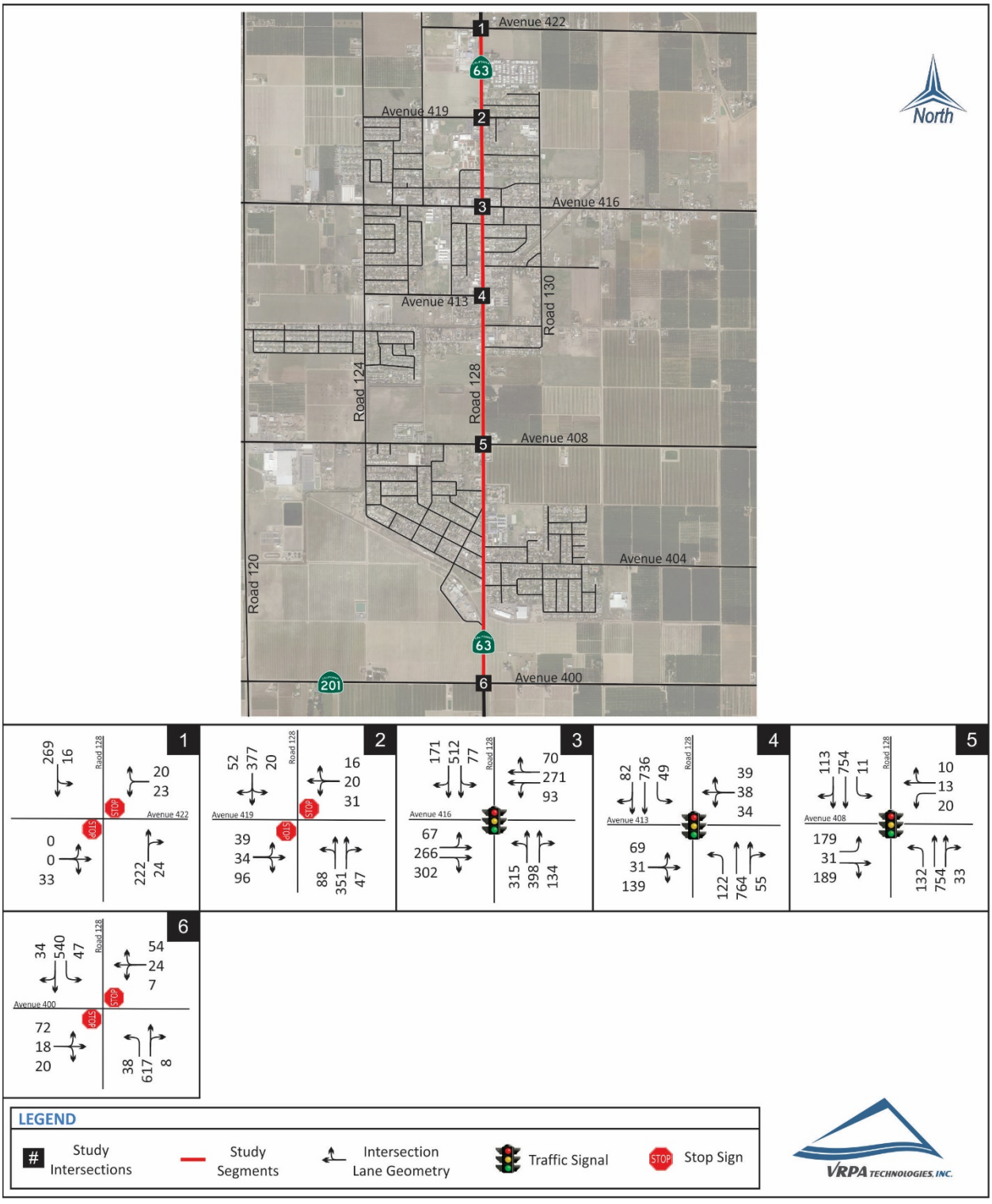
Cutler-Orosi Community Plan Update
Future Year 2040 Plus Build AM Peak Hour Traffic

Figure 3-4



Cutler-Orosi Community Plan Update
Future Year 2040 Plus Build PM Peak Hour Traffic

Figure 3-5



3.2 Impacts

3.2.1 *Intersection Capacity Analysis*

Table 3-1 shows the anticipated level of service conditions at study intersections for the Future Year 2040 scenarios. Results of the analysis show that two (2) of the study intersections will exceed level of service standards under the Future Year 2040 No Build scenario and three (3) of the study intersections will exceed level of service standards under the Future Year 2040 Plus Build scenarios. The improvement projects listed in Section 4.0 will alleviate level of service deficiencies at study intersections for all Future Year 2040 scenarios.

3.2.2 *Roadway Segment Capacity Analysis*

Table 3-2 shows the anticipated level of service conditions at study roadway segments for the Future Year 2040 scenarios. Results of the analysis show that all of the study roadway segments will meet the applicable level of service standards. As a result, no roadway segment improvements are warranted.

3.3 Queuing Analysis

Table 3-3 provides a queue length summary for the study intersections for the Future Year 2040 scenarios. The queuing analyses is based upon methodology presented in Chapter 400 of Caltrans' Highway Design Manual (HDM). Appendix C includes Chapter 400 of Caltrans' HDM. The queue results shown in Table 3-3 represent the approximate queue lengths for the respective lane movements.

3.4 Public Transit, Bikeways, and Pedestrian Circulation

As noted previously, the public transit system alternatives for Cutler-Orosi include fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services. Public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a relatively low-density community. Furthermore, the low level of auto congestion in Cutler-Orosi, now and into the future suggests that driving will continue to be more convenient than public transit for those with access to a private car. For those without access to a car, the best approach for improving transit in Cutler-Orosi will be to enhance rider information systems that give potential transit patrons precise arrival and departure times for transit and paratransit vehicles. Such real time information systems can both increase demand for public transit and paratransit and improve riders' overall experience.

With respect to pedestrian and bicycle modes, the current and projected low levels of vehicular traffic in Cutler-Orosi, together with short travel distances within the community, means that these modes can be very competitive for trips within Cutler-Orosi, even with minimal facilities. A reasonably flat, safe surface on the side of a low traffic road can often suffice for pedestrians and bicycles, especially if signs alert drivers to the presence of non-motorized traffic. Figure 3-6 shows the existing and proposed bicycle facilities in the vicinity of the Culter-Orosi community.

Table 3-1
Intersection Operations

INTERSECTION	CONTROL	TARGET LOS	PEAK HOUR	FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
				DELAY	LOS	DELAY	LOS
1. Road 128 / Avenue 422	Two-Way Stop Sign	C	AM	19.3	C	21.4	C
			PM	12.3	B	12.7	B
2. Road 128 / Avenue 419	Two-Way Stop Sign	C	AM	**>300.0 ***	**F ++**	**>300.0 ***	**F ++**
			PM	**38.5**	**E**	**48.8**	**E**
3. Road 128 / Avenue 416	Signalized	C	AM	29.9	C	**37.0**	**D**
			PM	23.8	C	25.9	C
4. Road 128 / Avenue 413	Signalized	C	AM	17.8	B	18.9	B
			PM	16.6	B	17.4	B
5. Road 128 / Avenue 408	Signalized	C	AM	20.8	C	22.3	C
			PM	20.8	C	22.1	C
6. Road 128 / Avenue 400	Two-Way Stop Sign	C	AM	**30.0**	**D**	**34.7**	**D**
			PM	**208.8**	**F ++**	**>300.0 ***	**F ++**

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

For signalized controlled intersections, delay results show the average for the entire intersection. For two-way stop controlled intersections, delay results show the delay for the worst movement.

* Delay exceeds 300 seconds

++ Meets Peak Hour Signal Warrant

Table 3-2
Segment Operations

STREET SEGMENT	SEGMENT DESCRIPTION	TARGET LOS	PEAK HOUR	FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
				VOLUME	LOS	VOLUME	LOS
1. Road 128 (SR 63)							
Avenue 422 to Avenue 419	2 Lanes Undivided	C	AM	1183	C	1248	C
			PM	810	B	855	B
Avenue 419 to Avenue 416	4 Lanes Undivided	C	AM	1586	C	1674	C
			PM	1228	C	1295	C
Avenue 416 to Avenue 413	4 Lanes Undivided	C	AM	1793	C	1893	C
			PM	1662	C	1754	C
Avenue 413 to Avenue 408	4 Lanes Undivided	C	AM	1852	C	1955	C
			PM	1753	C	1850	C
Avenue 408 to Avenue 400	4 Lanes Undivided	C	AM	1832	C	1933	C
			PM	1783	C	1881	C

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

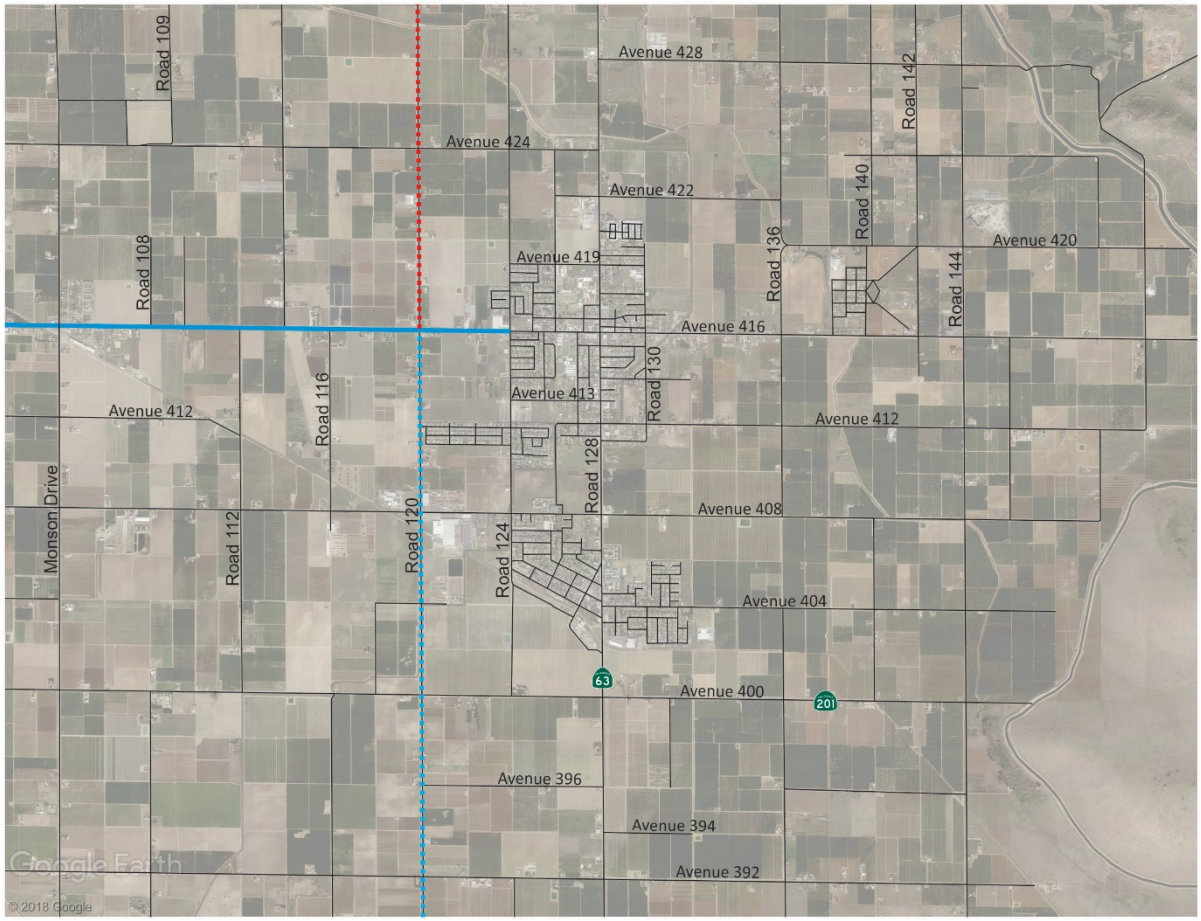
Table 3-3
Queuing Operations

INTERSECTION	EXISTING QUEUE STORAGE LENGTH (ft)		FUTURE YEAR 2040 NO BUILD		FUTURE YEAR 2040 PLUS BUILD	
			AM Queue	PM Queue	AM Queue	PM Queue
4. Road 128 / Avenue 413	NB Left	100	93	97	98	**102**
	SB Left	100	9	38	9	41
5. Road 128 / Avenue 408	NB Left	200	109	104	116	110
	SB Left	200	14	9	15	9
	EB Left	300	97	142	102	149
	WB Left	300	23	16	24	17
6. Road 128 / Avenue 400	NB Left	275	23	30	24	32
	SB Left	100	13	38	13	39

Queue is measured in feet / **BOLD** denotes exceedance

Cutler-Orosi Community Plan Update
Existing and Proposed Bike Facilities in the Cutler-Orosi Area

Figure 3-6



LEGEND

- Class II bike facility
- Planned Class II bike facility
- Planned Class III bike facility

VRPA TECHNOLOGIES, INC.

4.0 Standards of Significance

Results of the analysis show that all of the study intersections and roadway segments will meet Tulare County's LOS "D" criteria and Caltrans' LOS "C" criteria through the year 2040 with the development of specific roadway improvements.

CEQA Environmental Checklist

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. Implementation of the Cutler-Orosi Community Plan Update would result in a significant impact if it would:

- ✓ Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- ✓ Exceed the applicable vehicle miles traveled (VMT) threshold)?
- ✓ Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- ✓ Result in inadequate emergency access?

4.1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact After Mitigation **-** The proposed Cutler-Orosi Community Plan Update traffic analysis provides a policy framework to address potential traffic impacts encountered in the planning process. Results of the traffic analysis shows that the Cutler-Orosi Community Plan Update is in harmony with both the Tulare County General Plan and the TCAG Regional Transportation Plan. The General Plan currently calls for all intersections and roadway segments to be maintained at LOS "D" or better; this objective would be obtained given implementation of the Community Plan and the specific roadway improvements noted below. The Cutler-Orosi Community Plan also meets Caltrans' acceptable level of service criteria in the study area with the development of specific roadway improvements noted below. As a result, the Cutler-Orosi Community Plan Update will not conflict with a program, plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Described below are recommended improvements at study area intersections and segments for the Future Year 2040 scenarios that address future transportation and circulation issues in the Cutler-Orosi community. The improvements are recommended to provide consistency with the Tulare County General Plan and they would result in acceptable levels of service as shown in Table 4-1. As of January 2019 (with the incorporation of SB 743 into CEQA), deficiencies in the roadway system related to level of service and delay are no longer considered to be significant impacts under CEQA. Therefore, the improvements described below are recommendations but not CEQA mitigation measures.

4.1.1 *Intersections*

✓ Future Year 2040 No Build Scenario

Road 128 / Avenue 419
- Install Traffic Signal

Road 128 / Avenue 400
- Install Traffic Signal

✓ Future Year 2040 Plus Build Scenario

Road 128 / Avenue 419
- See MM TR-1

Road 128 / Avenue 416
- Widen the westbound approach to 1 left turn lane and 2 through lanes with a shared right (adding 1 left turn lane)

Road 128 / Avenue 400
- See MM TR-2

4.2 Would the project exceed the applicable vehicle miles traveled (VMT) significance threshold?

Less Than Significant Impact – In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. Upon its incorporation into CEQA in 2019, this legislation changed the way that transportation studies are conducted for environmental documents. Delay-based metrics such as roadway capacity and level of service are no longer the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, the new performance measures is vehicle miles travelled (VMT).

July 1, 2020 was the statewide implementation date for SB 743. In August of 2020, Tulare County prepared SB 743 Guidelines and established a significance threshold for Community Plan Updates and other types of projects. The applicable significance threshold for Community Plan Updates is VMT/capita in the horizon year that exceeds VMT/capita for existing conditions. The analysis described in Chapter 5 concludes that the project will not exceed this threshold.

4.3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact **-** The Cutler-Orosi Community Plan Update would not result in hazards due to design features, since all proposed improvements would be built to County and Caltrans design standards. The proposed Community Plan land uses would not increase the use of farm equipment on streets and roads in the Cutler-Orosi Community. As a result, the Project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, no mitigation is needed.

4.4 Result in inadequate emergency access?

Less Than Significant Impact **-** The Cutler-Orosi Community Plan Update would not result in any degradation of emergency access within the community. Congestion at an intersection or along a roadway can adversely impact emergency access. Results of the traffic analysis shows that all of the study intersections and roadway segments will meet acceptable levels of service with the development of specific roadway improvements. As a result, the Project will not result in inadequate emergency access. Therefore, no mitigation is needed.

Table 4-1
Intersection Operations with Improvements

INTERSECTION	TARGET LOS	PEAK HOUR	CUMULATIVE YEAR 2040 NO BUILD		CUMULATIVE YEAR 2040 PLUS BUILD	
			DELAY	LOS	DELAY	LOS
2. Road 128 / Avenue 419	C	AM	7.0	A	7.5	A
		PM	5.8	A	6.0	A
3. Road 128 / Avenue 416	C	AM			29.9	C
		PM			31.9	C
6. Road 128 / Avenue 400	C	AM	8.8	A	8.9	A
		PM	10.9	B	11.3	B

DELAY is measured in seconds

LOS = Level of Service / **BOLD** denotes LOS standard has been exceeded

5.0 Vehicle Miles Traveled (VMT) Analysis

This chapter provides an analysis of vehicle miles traveled (VMT) associated with implementation of the Project.

5.1 Background Information

Senate Bill 743 (SB 743) was implemented throughout California on July 1, 2020. This legislation requires that transportation analysis conducted under the California Environmental Quality Act (CEQA) be conducted using VMT or other similar performance measures rather than vehicle level of service and delay which was the traditional performance measure. SB 743 applies to both land development and transportation projects. In addition, it applies to projects initiated by public agencies as well as projects that are initiated by private companies and individuals.

In response to SB 743, Tulare County prepared SB 743 Guidelines (Tulare County, 2020) for conducting VMT studies. The thresholds of significance and screening criteria included in the guidelines were approved by the Board of Supervisors in August 2020. The County's guidelines were used in consideration of VMT for this project.

5.2 VMT Methodology

The adoption of the Tulare County SB 743 Guidelines established a significance threshold of VMT/capita in the horizon year higher than the VMT/capita for existing conditions. The following methodologies were considered for conducting the VMT analysis:

- ✓ Quantitative analysis using the TCAG regional travel demand model
- ✓ Quantitative analysis using sketch planning techniques
- ✓ Qualitative analysis

The first two methodologies listed above are specifically mentioned in the Tulare County SB 743 Guidelines. The third, qualitative analysis, can be used for any CEQA technical analysis, when applicable. Considerations for use of each of these methodologies are described below.

The potential use of the TCAG regional travel model for VMT analysis of Community Plan Updates is mentioned in Section 4.1 on page 20 of the Tulare County SB 743 Guidelines. In the case of the Cutler-Orosi Community Plan Update, there is very little new development expected and the VMT differences between the horizon would be difficult to discern in the TCAG regional travel demand model. Therefore, running the TCAG model was not considered to be a reasonable option for the VMT analysis methodology.

The County's SB 743 Guidelines suggest that it may be possible to conduct a VMT analysis using

sketch planning techniques. If a sketch model were used, it would rely on predicting the VMT changes associated with new developments. Since little or no new development is expected, there would be no basis for the VMT changes.

Use of qualitative VMT analysis for roadway projects is supported by Section 15064.3 of the CEQA Guidelines (Association of Environmental Professionals, 2021). The guidance includes the following "If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc."

Since both of the available quantitative VMT methodologies are not considered appropriate for use on this project, a qualitative analysis was used, as described below.

5.3 VMT Analysis

As stated above, the project's transportation impacts based on VMT were analyzed qualitatively. With respect to the different transportation modes, the project can be evaluated as follows:

- ✓ The roadway improvements recommended in Chapter 4 include the installation of traffic signals and intersection improvements. Other than these recommended improvements, no changes in the roadway system are expected to occur with the project. The roadway improvements recommended in Chapter 4 are not considered to affect VMT generation. As described in Chapter 5 of the Tulare County SB 743 Guidelines, the installation of traffic signals and intersection improvements would be screened out of consideration for conducting a VMT analysis. The lack of changes in the roadway system and the low level of change in land use leads to a conclusion that there will be no change in VMT/capita in the horizon year than occurs for existing conditions.

- ✓ No changes in the transit system are expected as a result of the implementation of the Community Plan Update. This leads to a conclusion that there will be no change in VMT/capita in the future with respect to transit ridership.

- ✓ As shown in Figure 3-6, there is one bikeway facility proposed in the Community Plan Update (along Road 120 north of Avenue 416). This would be expected to lead to a slight decrease in VMT/capita in the future due to increased bicycle trips that would replace automobile trips.

- ✓ No changes in the pedestrian system are expected as a result of the implementation of the Community Plan Update. This leads to a conclusion that there will be no change in VMT/capita in the future with respect to travel by walking.

Based on the County's SB 743 Guidelines, the significance thresholds for Community Plan Updates is the following:

- ✓ A significant impact would result if the VMT/capita of the study area within the planning horizon year exceeds the VMT/capita of the study area in the base year.

In a quantitative analysis, the determination of whether the threshold for significance is met would be determined based on the numerical increase or decrease in VMT associated with the project. In a qualitative analysis, the determination of whether the threshold is met would be based on whether the project qualitatively indicates a net increase or decrease in VMT. In the case of the proposed project, the analysis indicates no increase in VMT/capita with respect to the automobile, transit, and pedestrian travel modes and a qualitative decrease in VMT/capita with respect to the bicycle travel mode. Therefore, the project does not meet the significance threshold and the project has a less than significant impact.

APPENDIX A

Modified HCM-Based Tables (Florida Tables)

TABLE 4

Generalized **Peak Hour Two-Way** Volumes for Florida's **Urbanized Areas**[1]

03/14/2018

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Principal (1 signal per half mile)

Lanes	Median	B	C	D	E
2	Undivided	*	360	1,250	1,690
4	Divided	90	2,450	3,250	3,400
6	Divided	150	3,710	4,890	5,130

Minor (1 signal per quarter mile)

Lanes	Median	B	C	D	E
2	Undivided	*	*	380	1,290
4	Divided	*	850	2,530	3,350
6	Divided	*	1,600	3,980	5,050

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
4	4,560	6,200	7,690	7,870
6	6,650	9,150	11,350	11,820
8	8,760	12,130	15,110	15,760
10	11,960	16,800	19,710	**
12	14,820	19,980	23,640	**

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 1,800	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	1,110	1,690	2,290	3,070
4	Divided	3,350	4,840	6,090	6,840
6	Divided	5,040	7,250	9,130	10,250

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1,770	>1,770	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	260	850
50-84%	*	150	780	1,420
85-100%	340	960	1,560	>1,770

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

[1] Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

TABLE 4
(continued)

Generalized **Peak Hour Two-Way** Volumes for Florida's **Urbanized Areas**

03/14/2018

INPUT VALUE ASSUMPTIONS	Uninterrupted Flow Facilities			Interrupted Flow Facilities					
	Freeways	Highways		Principal Arterials		Minor Arterials		Bicycle	Pedestrian
ROADWAY CHARACTERISTICS									
Area type (urban, rural)	urban								
Number of through lanes (both dir.)	4-12	2	4-6	2-4	6	2-4	6	4	4
Posted speed (mph)	70	50	50	50	50	40	40	45	45
Free flow speed (mph)	75	55	55	55	55	45	45	50	50
Auxiliary Lanes (n, y)	n								
Median (d, u, twlt)			d						
Terrain (l,r)	l	l	l	l	l	l	l	l	l
% no passing zone		80							
Exclusive left turn lane impact (n, y)		[n]	y	y	y	y	y	y	y
Exclusive right turn lanes (n, y)				n	y	n	y		
Facility length (mi)	3	5	5	2	2	2	2	2	2
Interchange Density (intch/mi)	1								
TRAFFIC CHARACTERISTICS									
Planning analysis hour factor (K)	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
Directional distribution factor (D)	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.565	0.565
Peak hour factor (PHF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Base saturation flow rate (pcphpl)	2,400	1,700	2,100	1,950	1,950	1,950	1,950	1,950	1,950
Heavy vehicle percent	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.0
Speed Adjustment Factor (SAF)	0.950		0.950						
Capacity Adjustment Factor (CAF)	0.939		0.939						
% left turns				12	12	12	12	12	12
% right turns				12	12	12	12	12	12
CONTROL CHARACTERISTICS									
Number of signals				5	5	9	9	4	6
Arrival type (1-6)				3	3	3	3	4	4
Signal type (a, c, p)				c	c	c	c	c	c
Cycle length (C)				150	150	120	120	120	120
Effective green ratio (g/C)				0.44	0.44	0.44	0.44	0.44	0.44
MULTIMODAL CHARACTERISTICS									
Paved shoulder/bicycle lane (n, y)								n, 50%, y	n
Outside lane width								t	t
Pavement condition								t	
On-street parking								n	n
Sidewalk (n, y)									n, 50%, y
Sidewalk/roadway separation (a, t, w)									t
Sidewalk protective barrier (n, y)									n

LEVEL OF SERVICE THRESHOLDS

Level of Service	Freeways	Highways		Arterials	Bicycle	Ped	Bus
	Density pc/mi/ln	Two-Lane	Multilane	Principal & Minor	Score	Score	Buses/hr.
		%ffs	Density pc/mi/ln	%bffs			
B	≤ 18	> 83.3	≤ 18	> 67	≤ 2.75	≤ 2.75	≤ 6
C	≤ 26	> 75.0	≤ 26	> 50	≤ 3.50	≤ 3.50	≤ 4
D	≤ 35	> 66.7	≤ 35	> 40	≤ 4.25	≤ 4.25	< 3
E	≤ 45	≤ 66.7	≤ 45	> 30	≤ 5.00	≤ 5.00	< 2

pc/mi/ln = passenger cars per mile per lane %ffs = percent free flow speed %bffs = percent base free flow speed

APPENDIX B

Traffic Count Worksheets

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 128/SR 63 & Ave 422
City: Orosi
Control: 2-Way Stop(EB/WB)

Project ID: 18-07426-001
Date: 11/27/2018

Total

NS/EW Streets:	Rd 128/SR 63				Rd 128/SR 63				Ave 422				Ave 422				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0.5	0.5	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	13	1	0	3	20	0	0	0	0	1	0	2	0	2	0	42
7:15 AM	0	19	1	0	2	22	0	0	3	0	23	0	6	0	4	0	80
7:30 AM	0	21	1	0	3	66	0	0	8	3	62	0	23	0	3	0	190
7:45 AM	0	22	4	0	5	43	0	0	12	1	36	0	15	0	1	0	139
8:00 AM	0	29	8	0	2	19	0	0	0	0	2	0	2	0	3	0	65
8:15 AM	0	9	0	0	3	16	0	0	1	0	0	0	0	0	1	0	30
8:30 AM	0	17	3	0	1	18	0	0	0	0	1	0	1	0	2	0	43
8:45 AM	0	20	1	0	1	15	0	0	0	0	1	0	0	0	1	0	39
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	150	19	0	20	219	0	0	24	4	126	0	49	0	17	0	628
APPROACH %'s :	0.00%	88.76%	11.24%	0.00%	8.37%	91.63%	0.00%	0.00%	15.58%	2.60%	81.82%	0.00%	74.24%	0.00%	25.76%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	91	14	0	12	150	0	0	23	4	123	0	46	0	11	0	474
PEAK HR FACTOR :	0.000	0.784	0.438	0.000	0.600	0.568	0.000	0.000	0.479	0.333	0.496	0.000	0.500	0.000	0.688	0.000	0.624
		0.709				0.587				0.514				0.548			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0.5	0.5	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	29	3	0	2	40	0	0	0	0	2	0	3	0	5	0	84
4:15 PM	0	40	2	0	3	43	0	0	0	0	12	0	5	0	2	0	107
4:30 PM	0	33	5	0	2	39	0	0	0	0	0	0	3	0	3	0	85
4:45 PM	0	34	5	0	3	43	0	0	0	0	6	0	3	0	2	0	96
5:00 PM	0	34	0	0	4	38	0	0	0	0	4	0	2	0	1	0	83
5:15 PM	0	32	2	0	2	37	0	0	0	0	0	0	4	0	1	0	78
5:30 PM	0	26	0	0	1	30	0	0	1	0	1	0	2	0	3	0	64
5:45 PM	0	19	4	0	1	22	0	0	0	0	1	0	2	0	0	0	49
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	247	21	0	18	292	0	0	1	0	26	0	24	0	17	0	646
APPROACH %'s :	0.00%	92.16%	7.84%	0.00%	5.81%	94.19%	0.00%	0.00%	3.70%	0.00%	96.30%	0.00%	58.54%	0.00%	41.46%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	136	15	0	10	165	0	0	0	0	20	0	14	0	12	0	372
PEAK HR FACTOR :	0.000	0.850	0.750	0.000	0.833	0.959	0.000	0.000	0.000	0.000	0.417	0.000	0.700	0.000	0.600	0.000	0.869
		0.899				0.951				0.417				0.813			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 128/SR 63 & Ave 419
City: Orosi
Control: 2-Way Stop(EB/WB)

Project ID: 18-07426-002
Date: 11/27/2018

Total

NS/EW Streets:	Rd 128/SR 63				Rd 128/SR 63				Ave 419				Ave 419				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	27	4	0	4	38	4	0	3	0	5	0	1	1	2	0	91
7:15 AM	9	68	7	0	15	41	17	0	2	3	11	0	4	2	4	0	183
7:30 AM	6	97	21	0	18	139	13	0	3	5	13	0	1	3	5	0	324
7:45 AM	13	53	41	0	23	128	25	0	4	3	25	0	5	11	8	0	339
8:00 AM	8	38	11	0	2	42	8	0	4	0	11	0	25	19	8	0	176
8:15 AM	3	20	1	0	1	23	2	0	7	1	4	0	5	2	2	0	71
8:30 AM	4	18	3	0	2	22	1	0	3	0	3	0	3	3	1	0	63
8:45 AM	5	23	1	0	0	24	2	0	1	0	4	0	2	0	2	0	64
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	344	89	0	65	457	72	0	27	12	76	0	46	41	32	0	1311
APPROACH %'s :	10.35%	71.22%	18.43%	0.00%	10.94%	76.94%	12.12%	0.00%	23.48%	10.43%	66.09%	0.00%	38.66%	34.45%	26.89%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	36	256	80	0	58	350	63	0	13	11	60	0	35	35	25	0	1022
PEAK HR FACTOR :	0.692	0.660	0.488	0.000	0.630	0.629	0.630	0.000	0.813	0.550	0.600	0.000	0.350	0.461	0.781	0.000	0.754
	0.750				0.669				0.656				0.457				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	48	6	0	3	57	17	0	7	3	8	0	6	3	1	0	167
4:15 PM	7	56	8	0	3	66	5	0	4	3	17	0	5	3	6	0	183
4:30 PM	14	59	5	0	2	56	8	0	3	4	12	0	8	3	2	0	176
4:45 PM	10	46	9	0	3	59	10	0	10	3	16	0	2	3	0	0	171
5:00 PM	23	54	7	0	4	50	9	0	7	11	14	0	4	3	2	0	188
5:15 PM	6	39	11	0	5	51	14	0	8	6	7	0	8	4	4	0	163
5:30 PM	11	45	3	0	4	41	7	0	11	4	10	0	3	0	1	0	140
5:45 PM	8	29	3	0	1	40	6	0	5	0	7	0	3	4	0	0	106
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	87	376	52	0	25	420	76	0	55	34	91	0	39	23	16	0	1294
APPROACH %'s :	16.89%	73.01%	10.10%	0.00%	4.80%	80.61%	14.59%	0.00%	30.56%	18.89%	50.56%	0.00%	50.00%	29.49%	20.51%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	54	215	29	0	12	231	32	0	24	21	59	0	19	12	10	0	718
PEAK HR FACTOR :	0.587	0.911	0.806	0.000	0.750	0.875	0.800	0.000	0.600	0.477	0.868	0.000	0.594	1.000	0.417	0.000	0.955
	0.887				0.929				0.813				0.732				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 128/SR 63 & Ave 416
City: Orosi
Control: Signalized

Project ID: 18-07426-003
Date: 11/27/2018

Total

NS/EW Streets:	Rd 128/SR 63				Rd 128/SR 63				Ave 416				Ave 416				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	32	31	3	0	1	36	13	0	7	17	17	0	6	20	3	0	186
7:15 AM	26	75	8	0	2	43	14	0	8	13	23	0	15	31	16	0	274
7:30 AM	48	115	14	0	8	106	31	0	11	31	25	0	15	52	9	0	465
7:45 AM	41	115	28	0	18	145	56	0	17	39	26	0	18	59	15	0	577
8:00 AM	52	65	17	0	13	88	32	0	19	25	38	0	14	49	5	0	417
8:15 AM	38	19	17	0	6	30	12	0	7	13	32	0	17	26	3	0	220
8:30 AM	27	24	10	0	1	27	6	0	4	17	17	0	12	20	4	0	169
8:45 AM	46	27	10	0	2	29	11	0	7	16	25	0	6	21	2	0	202
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	310	471	107	0	51	504	175	0	80	171	203	0	103	278	57	0	2510
APPROACH %'s :	34.91%	53.04%	12.05%	0.00%	6.99%	69.04%	23.97%	0.00%	17.62%	37.67%	44.71%	0.00%	23.52%	63.47%	13.01%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	167	370	67	0	41	382	133	0	55	108	112	0	62	191	45	0	1733
PEAK HR FACTOR :	0.803	0.804	0.598	0.000	0.569	0.659	0.594	0.000	0.724	0.692	0.737	0.000	0.861	0.809	0.703	0.000	0.751
	0.821				0.635				0.838				0.810				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	41	51	13	0	12	70	25	0	13	32	49	0	18	43	11	0	378
4:15 PM	49	55	26	0	13	71	25	0	12	40	51	0	14	47	16	0	419
4:30 PM	52	59	21	0	10	89	27	0	7	45	40	0	12	42	8	0	412
4:45 PM	52	62	17	0	11	79	30	0	11	45	47	0	13	35	8	0	410
5:00 PM	40	68	18	0	13	75	23	0	11	33	47	0	18	42	11	0	399
5:15 PM	58	54	28	0	11	51	28	0	6	48	55	0	16	41	3	0	399
5:30 PM	43	47	16	0	9	68	10	0	10	34	39	0	18	23	8	0	325
5:45 PM	40	39	7	0	6	48	17	0	8	42	55	0	13	30	6	0	311
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	375	435	146	0	85	551	185	0	78	319	383	0	122	303	71	0	3053
APPROACH %'s :	39.23%	45.50%	15.27%	0.00%	10.35%	67.11%	22.53%	0.00%	10.00%	40.90%	49.10%	0.00%	24.60%	61.09%	14.31%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	193	244	82	0	47	314	105	0	41	163	185	0	57	166	43	0	1640
PEAK HR FACTOR :	0.928	0.897	0.788	0.000	0.904	0.882	0.875	0.000	0.854	0.906	0.907	0.000	0.792	0.883	0.672	0.000	0.979
	0.983				0.925				0.944				0.864				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 128/SR 63 & Ave 413
City: Orosi
Control: Signalized

Project ID: 18-07426-004
Date: 11/27/2018

Total

NS/EW Streets:	Rd 128/SR 63				Rd 128/SR 63				Ave 413				Ave 413				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	68	2	0	0	55	2	0	7	0	7	0	2	0	1	0	150
7:15 AM	12	104	2	0	4	64	8	0	10	0	16	0	3	1	0	0	224
7:30 AM	22	165	0	0	2	126	11	0	16	3	24	0	5	0	5	0	379
7:45 AM	24	150	2	0	0	164	18	0	28	7	28	0	4	6	2	0	433
8:00 AM	14	102	4	0	1	125	15	0	19	6	33	0	5	2	2	0	328
8:15 AM	4	63	2	0	1	78	7	0	4	0	11	0	3	1	1	0	175
8:30 AM	5	54	4	0	3	54	8	0	5	1	15	0	3	0	2	0	154
8:45 AM	12	67	3	0	2	51	3	0	4	2	4	0	1	2	3	0	154
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	99	773	19	0	13	717	72	0	93	19	138	0	26	12	16	0	1997
APPROACH %'s :	11.11%	86.76%	2.13%	0.00%	1.62%	89.40%	8.98%	0.00%	37.20%	7.60%	55.20%	0.00%	48.15%	22.22%	29.63%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	72	521	8	0	7	479	52	0	73	16	101	0	17	9	9	0	1364
PEAK HR FACTOR :	0.750	0.789	0.500	0.000	0.438	0.730	0.722	0.000	0.652	0.571	0.765	0.000	0.850	0.375	0.450	0.000	0.788
	0.803				0.739				0.754				0.729				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	18	102	8	0	7	120	12	0	12	7	21	0	2	4	3	0	316
4:15 PM	21	128	5	0	10	104	11	0	8	2	19	0	9	10	5	0	332
4:30 PM	18	114	6	0	9	109	16	0	9	4	26	0	5	5	6	0	327
4:45 PM	18	124	15	0	4	118	11	0	13	6	19	0	5	4	10	0	347
5:00 PM	10	106	6	0	7	113	11	0	8	4	11	0	9	4	4	0	293
5:15 PM	20	120	3	0	4	103	6	0	9	8	17	0	11	6	5	0	312
5:30 PM	15	97	7	0	5	114	12	0	7	3	18	0	1	0	6	0	285
5:45 PM	17	97	6	0	8	95	14	0	4	9	9	0	7	8	7	0	281
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	137	888	56	0	54	876	93	0	70	43	140	0	49	41	46	0	2493
APPROACH %'s :	12.67%	82.15%	5.18%	0.00%	5.28%	85.63%	9.09%	0.00%	27.67%	17.00%	55.34%	0.00%	36.03%	30.15%	33.82%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	75	468	34	0	30	451	50	0	42	19	85	0	21	23	24	0	1322
PEAK HR FACTOR :	0.893	0.914	0.567	0.000	0.750	0.940	0.781	0.000	0.808	0.679	0.817	0.000	0.583	0.575	0.600	0.000	0.952
	0.919				0.955				0.913				0.708				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 128/SR 63 & Ave 408
City: Cutler
Control: Signalized

Project ID: 18-07426-005
Date: 11/27/2018

Total

NS/EW Streets:	Rd 128/SR 63				Rd 128/SR 63				Ave 408				Ave 408				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	13	62	1	0	2	46	9	0	4	1	6	0	2	4	0	0	150
7:15 AM	11	94	1	0	1	77	5	0	19	6	14	0	5	2	2	0	237
7:30 AM	19	134	3	0	2	129	15	0	30	0	29	0	3	5	3	0	372
7:45 AM	28	146	2	0	4	175	37	0	11	5	43	0	8	1	2	0	462
8:00 AM	27	94	10	0	4	118	21	0	15	9	13	0	2	0	0	0	313
8:15 AM	13	49	2	0	5	58	21	0	9	2	11	0	3	2	1	0	176
8:30 AM	9	51	1	0	1	58	11	0	10	4	12	0	1	0	0	0	158
8:45 AM	11	59	2	0	1	42	8	0	9	1	7	0	2	6	1	0	149
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	131	689	22	0	20	703	127	0	107	28	135	0	26	20	9	0	2017
APPROACH %'s :	15.56%	81.83%	2.61%	0.00%	2.35%	82.71%	14.94%	0.00%	39.63%	10.37%	50.00%	0.00%	47.27%	36.36%	16.36%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	85	468	16	0	11	499	78	0	75	20	99	0	18	8	7	0	1384
PEAK HR FACTOR :	0.759	0.801	0.400	0.000	0.688	0.713	0.527	0.000	0.625	0.556	0.576	0.000	0.563	0.400	0.583	0.000	0.749
	0.808				0.681				0.822				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	18	102	3	0	1	118	12	0	30	4	37	0	5	2	2	0	334
4:15 PM	26	125	3	0	3	104	20	0	29	9	35	0	1	1	2	0	358
4:30 PM	17	116	3	0	3	119	25	0	26	3	18	0	5	3	1	0	339
4:45 PM	20	119	11	0	0	121	12	0	25	3	26	0	1	2	1	0	341
5:00 PM	22	95	2	0	2	104	22	0	15	9	22	0	6	7	3	0	309
5:15 PM	17	97	6	0	2	69	28	0	22	4	20	0	2	3	4	0	274
5:30 PM	21	94	5	0	5	98	21	0	16	2	19	0	4	2	0	0	287
5:45 PM	23	95	1	0	0	75	35	0	25	7	19	0	1	3	0	0	284
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	164	843	34	0	16	808	175	0	188	41	196	0	25	23	13	0	2526
APPROACH %'s :	15.75%	80.98%	3.27%	0.00%	1.60%	80.88%	17.52%	0.00%	44.24%	9.65%	46.12%	0.00%	40.98%	37.70%	21.31%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	81	462	20	0	7	462	69	0	110	19	116	0	12	8	6	0	1372
PEAK HR FACTOR :	0.779	0.924	0.455	0.000	0.583	0.955	0.690	0.000	0.917	0.528	0.784	0.000	0.600	0.667	0.750	0.000	0.958
	0.914				0.915				0.839				0.722				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rd 128/SR 63 & Ave 400/SR 201
City: Cutler
Control: 2-Way Stop(EB/WB)

Project ID: 18-07426-006
Date: 11/27/2018

Total

NS/EW Streets:	Rd 128/SR 63				Rd 128/SR 63				Ave 400/SR 201				Ave 400/SR 201				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	48	0	0	0	64	2	0	5	0	2	0	0	0	1	0	126
7:15 AM	4	45	1	0	0	93	5	0	4	0	2	0	0	0	2	0	156
7:30 AM	3	87	1	0	1	102	7	0	3	3	5	0	0	1	4	0	217
7:45 AM	6	97	0	0	3	70	6	0	8	2	2	0	2	4	4	0	204
8:00 AM	5	38	0	0	6	88	8	0	2	2	3	0	0	2	3	0	157
8:15 AM	2	40	0	0	2	73	5	0	3	4	2	0	0	2	2	0	135
8:30 AM	2	37	2	0	4	63	5	0	1	2	2	0	1	2	5	0	126
8:45 AM	1	50	2	0	0	44	5	0	4	1	0	0	1	3	2	0	113
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	27	442	6	0	16	597	43	0	30	14	18	0	4	14	23	0	1234
APPROACH %'s :	5.68%	93.05%	1.26%	0.00%	2.44%	91.01%	6.55%	0.00%	48.39%	22.58%	29.03%	0.00%	9.76%	34.15%	56.10%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	18	267	2	0	10	353	26	0	17	7	12	0	2	7	13	0	734
PEAK HR FACTOR :	0.750	0.688	0.500	0.000	0.417	0.865	0.813	0.000	0.531	0.583	0.600	0.000	0.250	0.438	0.813	0.000	0.846
	0.697				0.884				0.750				0.550				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	5	100	3	0	8	92	5	0	14	1	3	0	2	3	11	0	247
4:15 PM	6	87	0	0	7	77	6	0	8	3	5	0	1	5	9	0	214
4:30 PM	5	107	2	0	8	82	3	0	14	5	2	0	1	6	4	0	239
4:45 PM	7	84	0	0	6	80	7	0	8	2	2	0	0	1	9	0	206
5:00 PM	2	76	0	0	6	75	6	0	7	2	4	0	0	1	12	0	191
5:15 PM	3	93	0	0	2	59	3	0	4	2	2	0	1	5	9	0	183
5:30 PM	4	104	0	0	4	69	3	0	6	0	6	0	0	0	1	0	197
5:45 PM	6	86	2	0	0	57	1	0	2	0	2	0	0	2	2	0	160
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	38	737	7	0	41	591	34	0	63	15	26	0	5	23	57	0	1637
APPROACH %'s :	4.86%	94.25%	0.90%	0.00%	6.16%	88.74%	5.11%	0.00%	60.58%	14.42%	25.00%	0.00%	5.88%	27.06%	67.06%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	23	378	5	0	29	331	21	0	44	11	12	0	4	15	33	0	906
PEAK HR FACTOR :	0.821	0.883	0.417	0.000	0.906	0.899	0.750	0.000	0.786	0.550	0.600	0.000	0.500	0.625	0.750	0.000	0.917
	0.890				0.907				0.798				0.813				

APPENDIX C

SYNCHRO 10 Worksheets

EXISTING WORKSHEETS

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	4	123	46	0	11	0	91	14	12	150	0
Future Vol, veh/h	23	4	123	46	0	11	0	91	14	12	150	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	51	51	51	55	55	55	71	71	71	59	59	59
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	45	8	241	84	0	20	0	128	20	20	254	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	442	442	254	436	432	138	-	0	0	148	0	0
Stage 1	294	294	-	138	138	-	-	-	-	-	-	-
Stage 2	148	148	-	298	294	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	-	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	524	508	782	529	515	908	0	-	-	1398	-	0
Stage 1	712	668	-	863	780	-	0	-	-	-	-	0
Stage 2	852	773	-	709	668	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	506	499	782	357	506	908	-	-	-	1398	-	-
Mov Cap-2 Maneuver	506	499	-	357	506	-	-	-	-	-	-	-
Stage 1	712	657	-	863	780	-	-	-	-	-	-	-
Stage 2	833	773	-	476	657	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	17	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	954	404	1398	-
HCM Lane V/C Ratio	-	-	0.308	0.257	0.015	-
HCM Control Delay (s)	-	-	10.4	17	7.6	0
HCM Lane LOS	-	-	B	C	A	A
HCM 95th %tile Q(veh)	-	-	1.3	1	0	-

Intersection	
Int Delay, s/veh	50.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	11	60	35	35	25	36	256	80	58	350	63
Future Vol, veh/h	13	11	60	35	35	25	36	256	80	58	350	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	46	46	46	75	75	75	67	67	67
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	20	17	91	76	76	54	48	341	107	87	522	94

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1048	1287	569	1288	1281	224	616	0	0	448	0	0
Stage 1	743	743	-	491	491	-	-	-	-	-	-	-
Stage 2	305	544	-	797	790	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.276	-	-	2.276	-	-
Pot Cap-1 Maneuver	192	162	518	130	164	777	928	-	-	1074	-	-
Stage 1	404	419	-	526	545	-	-	-	-	-	-	-
Stage 2	678	516	-	377	399	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	85	132	518	83	133	777	928	-	-	1074	-	-
Mov Cap-2 Maneuver	85	132	-	83	133	-	-	-	-	-	-	-
Stage 1	376	367	-	489	507	-	-	-	-	-	-	-
Stage 2	498	480	-	260	349	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	36	$ 347.3	1	1.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	928	-	-	239	132	1074	-	-
HCM Lane V/C Ratio	0.052	-	-	0.533	1.565	0.081	-	-
HCM Control Delay (s)	9.1	0.2	-	36	$ 347.3	8.6	0	-
HCM Lane LOS	A	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	2.8	14.6	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

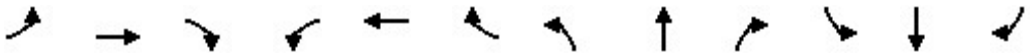
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	7	12	2	7	13	18	267	2	10	353	26
Future Vol, veh/h	17	7	12	2	7	13	18	267	2	10	353	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	55	55	55	70	70	70	88	88	88
Heavy Vehicles, %	3	3	9	3	3	3	9	8	8	8	8	8
Mvmt Flow	23	9	16	4	13	24	26	381	3	11	401	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	891	874	416	886	888	383	431	0	0	384	0	0
Stage 1	438	438	-	435	435	-	-	-	-	-	-	-
Stage 2	453	436	-	451	453	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.29	7.13	6.53	6.23	4.19	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.381	3.527	4.027	3.327	2.281	-	-	2.272	-	-
Pot Cap-1 Maneuver	262	287	622	264	282	662	1092	-	-	1142	-	-
Stage 1	595	577	-	598	579	-	-	-	-	-	-	-
Stage 2	584	578	-	586	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	237	277	622	244	272	662	1092	-	-	1142	-	-
Mov Cap-2 Maneuver	237	277	-	244	272	-	-	-	-	-	-	-
Stage 1	581	571	-	584	565	-	-	-	-	-	-	-
Stage 2	537	564	-	556	562	-	-	-	-	-	-	-

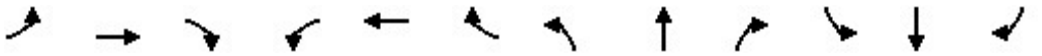
Approach	EB	WB	NB	SB
HCM Control Delay, s	18.7	14.7	0.5	0.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1092	-	-	310	411	1142	-	-
HCM Lane V/C Ratio	0.024	-	-	0.155	0.097	0.01	-	-
HCM Control Delay (s)	8.4	-	-	18.7	14.7	8.2	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.3	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	108	112	62	191	45	167	370	67	41	382	133
Future Volume (vph)	55	108	112	62	191	45	167	370	67	41	382	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.94			0.98			0.98			0.96	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3259			3390			3242			3211	
Flt Permitted		0.72			0.73			0.62			0.74	
Satd. Flow (perm)		2376			2516			2050			2386	
Peak-hour factor, PHF	0.84	0.84	0.84	0.81	0.81	0.81	0.82	0.82	0.82	0.64	0.64	0.64
Adj. Flow (vph)	65	129	133	77	236	56	204	451	82	64	597	208
RTOR Reduction (vph)	0	107	0	0	18	0	0	10	0	0	32	0
Lane Group Flow (vph)	0	220	0	0	351	0	0	727	0	0	837	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.2			16.2			36.1			36.1	
Effective Green, g (s)		16.2			16.2			36.1			36.1	
Actuated g/C Ratio		0.19			0.19			0.43			0.43	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		459			486			1139			1205	
v/s Ratio Prot								c0.14			c0.15	
v/s Ratio Perm		0.09			c0.14			0.14			c0.15	
v/c Ratio		0.48			0.72			0.64			0.69	
Uniform Delay, d1		30.0			31.7			18.7			19.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			5.3			2.7			3.3	
Delay (s)		30.8			37.0			21.5			22.7	
Level of Service		C			D			C			C	
Approach Delay (s)		30.8			37.0			21.5			22.7	
Approach LOS		C			D			C			C	

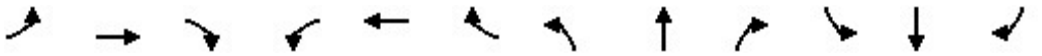
Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	16	101	17	9	9	72	521	8	7	479	52
Future Volume (veh/h)	73	16	101	17	9	9	72	521	8	7	479	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	97	21	135	23	12	12	90	651	10	9	647	70
Peak Hour Factor	0.75	0.75	0.75	0.73	0.73	0.73	0.80	0.80	0.80	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	171	44	166	189	98	73	115	2035	31	19	1664	180
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.07	0.60	0.60	0.01	0.54	0.54
Sat Flow, veh/h	500	215	818	564	484	359	1697	3412	52	1697	3081	333
Grp Volume(v), veh/h	253	0	0	47	0	0	90	323	338	9	355	362
Grp Sat Flow(s),veh/h/ln	1534	0	0	1407	0	0	1697	1692	1772	1697	1692	1722
Q Serve(g_s), s	9.2	0.0	0.0	0.0	0.0	0.0	3.7	6.8	6.8	0.4	8.7	8.7
Cycle Q Clear(g_c), s	11.2	0.0	0.0	1.5	0.0	0.0	3.7	6.8	6.8	0.4	8.7	8.7
Prop In Lane	0.38		0.53	0.49		0.26	1.00		0.03	1.00		0.19
Lane Grp Cap(c), veh/h	381	0	0	360	0	0	115	1009	1057	19	914	930
V/C Ratio(X)	0.66	0.00	0.00	0.13	0.00	0.00	0.78	0.32	0.32	0.46	0.39	0.39
Avail Cap(c_a), veh/h	679	0	0	642	0	0	298	1009	1057	131	914	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	0.0	23.3	0.0	0.0	32.7	7.2	7.2	35.0	9.5	9.5
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.2	0.0	0.0	10.9	0.8	0.8	16.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	0.6	0.0	0.0	1.8	2.2	2.3	0.2	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	0.0	0.0	23.4	0.0	0.0	43.6	8.0	8.0	51.2	10.8	10.8
LnGrp LOS	C	A	A	C	A	A	D	A	A	D	B	B
Approach Vol, veh/h		253			47			751			726	
Approach Delay, s/veh		29.0			23.4			12.3			11.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	47.0		18.9	9.3	43.0		18.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	42.5		28.5	12.5	35.5		28.5				
Max Q Clear Time (g_c+I1), s	2.4	8.8		13.2	5.7	10.7		3.5				
Green Ext Time (p_c), s	0.0	4.3		1.3	0.1	4.6		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		14.5	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	20	99	18	8	7	85	468	16	11	499	78
Future Volume (veh/h)	75	20	99	18	8	7	85	468	16	11	499	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	91	24	121	24	11	9	105	578	20	16	734	115
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.81	0.81	0.81	0.68	0.68	0.68
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	117	33	167	47	79	65	134	1901	66	32	1495	234
Arrive On Green	0.07	0.12	0.12	0.03	0.08	0.08	0.08	0.57	0.57	0.02	0.51	0.51
Sat Flow, veh/h	1767	267	1346	1767	944	772	1697	3338	115	1697	2932	459
Grp Volume(v), veh/h	91	0	145	24	0	20	105	293	305	16	424	425
Grp Sat Flow(s),veh/h/ln	1767	0	1613	1767	0	1717	1697	1692	1761	1697	1692	1699
Q Serve(g_s), s	3.5	0.0	6.0	0.9	0.0	0.7	4.2	6.2	6.2	0.6	11.3	11.3
Cycle Q Clear(g_c), s	3.5	0.0	6.0	0.9	0.0	0.7	4.2	6.2	6.2	0.6	11.3	11.3
Prop In Lane	1.00		0.83	1.00		0.45	1.00		0.07	1.00		0.27
Lane Grp Cap(c), veh/h	117	0	200	47	0	144	134	964	1003	32	863	866
V/C Ratio(X)	0.77	0.00	0.73	0.51	0.00	0.14	0.78	0.30	0.30	0.49	0.49	0.49
Avail Cap(c_a), veh/h	243	0	514	143	0	450	283	964	1003	125	863	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	29.1	33.1	0.0	29.3	31.2	7.7	7.7	33.5	11.1	11.1
Incr Delay (d2), s/veh	10.3	0.0	5.0	8.2	0.0	0.4	9.6	0.8	0.8	11.1	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	2.5	0.5	0.0	0.3	1.9	1.9	1.9	0.3	3.8	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	0.0	34.1	41.3	0.0	29.7	40.8	8.5	8.5	44.6	13.1	13.1
LnGrp LOS	D	A	C	D	A	C	D	A	A	D	B	B
Approach Vol, veh/h		236			44			703			865	
Approach Delay, s/veh		37.1			36.1			13.4			13.6	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	43.8	6.3	13.0	9.9	39.7	9.1	10.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	39.3	5.6	22.0	11.5	32.9	9.5	18.1
Max Q Clear Time (g_c+I1), s	2.6	8.2	2.9	8.0	6.2	13.3	5.5	2.7
Green Ext Time (p_c), s	0.0	3.5	0.0	0.6	0.1	4.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	20	14	0	12	0	136	15	10	165	0
Future Vol, veh/h	0	0	20	14	0	12	0	136	15	10	165	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	42	42	42	81	81	81	90	90	90	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	0	0	48	17	0	15	0	151	17	11	174	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	363	364	174	356	356	160	-	0	0	168	0	0
Stage 1	196	196	-	160	160	-	-	-	-	-	-	-
Stage 2	167	168	-	196	196	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	-	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	591	562	867	597	568	882	0	-	-	1374	-	0
Stage 1	803	737	-	840	764	-	0	-	-	-	-	0
Stage 2	833	758	-	803	737	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	577	557	867	561	563	882	-	-	-	1374	-	-
Mov Cap-2 Maneuver	577	557	-	561	563	-	-	-	-	-	-	-
Stage 1	803	730	-	840	764	-	-	-	-	-	-	-
Stage 2	819	758	-	752	730	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	10.6	0	0.4
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	867	674	1374	-
HCM Lane V/C Ratio	-	-	0.055	0.048	0.008	-
HCM Control Delay (s)	-	-	9.4	10.6	7.6	0
HCM Lane LOS	-	-	A	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	21	59	19	12	10	54	215	29	12	231	32
Future Vol, veh/h	24	21	59	19	12	10	54	215	29	12	231	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	73	73	73	89	89	89	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	30	26	73	26	16	14	61	242	33	13	248	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	542	688	265	722	689	138	282	0	0	275	0	0
Stage 1	291	291	-	381	381	-	-	-	-	-	-	-
Stage 2	251	397	-	341	308	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.276	-	-	2.276	-	-
Pot Cap-1 Maneuver	435	367	770	326	366	883	1241	-	-	1248	-	-
Stage 1	714	669	-	612	610	-	-	-	-	-	-	-
Stage 2	729	600	-	671	657	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	391	342	770	263	341	883	1241	-	-	1248	-	-
Mov Cap-2 Maneuver	391	342	-	263	341	-	-	-	-	-	-	-
Stage 1	673	661	-	577	575	-	-	-	-	-	-	-
Stage 2	657	565	-	577	649	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	17.5	1.6	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	522	345	1248	-	-
HCM Lane V/C Ratio	0.049	-	-	0.246	0.163	0.01	-	-
HCM Control Delay (s)	8.1	0.2	-	14.1	17.5	7.9	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1	0.6	0	-	-

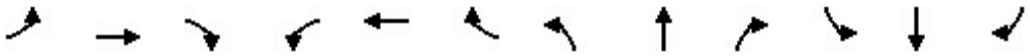
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	11	12	4	15	33	23	378	5	29	331	21
Future Vol, veh/h	44	11	12	4	15	33	23	378	5	29	331	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	81	81	81	89	89	89	91	91	91
Heavy Vehicles, %	3	3	9	3	3	3	9	8	8	8	8	8
Mvmt Flow	55	14	15	5	19	41	26	425	6	32	364	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	950	923	376	934	931	428	387	0	0	431	0	0
Stage 1	440	440	-	480	480	-	-	-	-	-	-	-
Stage 2	510	483	-	454	451	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.29	7.13	6.53	6.23	4.19	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.381	3.527	4.027	3.327	2.281	-	-	2.272	-	-
Pot Cap-1 Maneuver	239	269	655	245	266	625	1134	-	-	1097	-	-
Stage 1	594	576	-	565	553	-	-	-	-	-	-	-
Stage 2	544	551	-	584	569	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	203	255	655	221	252	625	1134	-	-	1097	-	-
Mov Cap-2 Maneuver	203	255	-	221	252	-	-	-	-	-	-	-
Stage 1	580	559	-	552	540	-	-	-	-	-	-	-
Stage 2	480	538	-	540	552	-	-	-	-	-	-	-

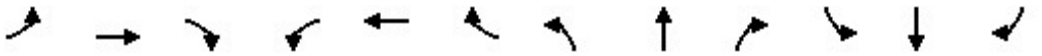
Approach	EB	WB	NB	SB
HCM Control Delay, s	27.7	15.7	0.5	0.6
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1134	-	-	241	399	1097	-	-
HCM Lane V/C Ratio	0.023	-	-	0.348	0.161	0.029	-	-
HCM Control Delay (s)	8.2	-	-	27.7	15.7	8.4	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0.6	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	163	185	57	166	43	193	244	82	47	314	105
Future Volume (vph)	41	163	185	57	166	43	193	244	82	47	314	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.93			0.98			0.98			0.97	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		3237			3384			3204			3213	
Flt Permitted		0.88			0.70			0.95			0.95	
Satd. Flow (perm)		2859			2398			3116			3084	
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	44	173	197	66	193	50	197	249	84	51	338	113
RTOR Reduction (vph)	0	160	0	0	25	0	0	21	0	0	37	0
Lane Group Flow (vph)	0	254	0	0	284	0	0	509	0	0	465	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.0			12.0			20.0			20.0	
Effective Green, g (s)		12.0			12.0			20.0			20.0	
Actuated g/C Ratio		0.19			0.19			0.31			0.31	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		540			453			1006			1007	
v/s Ratio Prot								c0.14			c0.13	
v/s Ratio Perm		0.09			c0.12			0.02			0.01	
v/c Ratio		0.47			0.63			0.51			0.46	
Uniform Delay, d1		22.9			23.7			17.7			17.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			2.7			1.8			1.5	
Delay (s)		23.6			26.4			19.5			19.0	
Level of Service		C			C			B			B	
Approach Delay (s)		23.6			26.4			19.5			19.0	
Approach LOS		C			C			B			B	

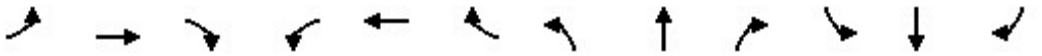
Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	19	85	21	23	24	75	468	34	30	451	50
Future Volume (veh/h)	42	19	85	21	23	24	75	468	34	30	451	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	46	21	93	30	32	34	82	509	37	31	470	52
Peak Hour Factor	0.91	0.91	0.91	0.71	0.71	0.71	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	120	44	127	122	102	83	105	1980	144	56	1814	200
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.06	0.62	0.62	0.03	0.59	0.59
Sat Flow, veh/h	344	326	929	353	750	605	1697	3200	232	1697	3074	339
Grp Volume(v), veh/h	160	0	0	96	0	0	82	269	277	31	258	264
Grp Sat Flow(s),veh/h/ln	1598	0	0	1708	0	0	1697	1692	1740	1697	1692	1720
Q Serve(g_s), s	2.8	0.0	0.0	0.0	0.0	0.0	3.0	4.6	4.6	1.1	4.7	4.7
Cycle Q Clear(g_c), s	6.0	0.0	0.0	3.2	0.0	0.0	3.0	4.6	4.6	1.1	4.7	4.7
Prop In Lane	0.29		0.58	0.31		0.35	1.00		0.13	1.00		0.20
Lane Grp Cap(c), veh/h	291	0	0	307	0	0	105	1047	1077	56	999	1015
V/C Ratio(X)	0.55	0.00	0.00	0.31	0.00	0.00	0.78	0.26	0.26	0.55	0.26	0.26
Avail Cap(c_a), veh/h	715	0	0	735	0	0	439	1047	1077	279	999	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	0.0	25.2	0.0	0.0	29.5	5.5	5.5	30.4	6.3	6.3
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.6	0.0	0.0	11.7	0.6	0.6	8.2	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	1.3	0.0	0.0	1.5	1.3	1.4	0.6	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	0.0	25.8	0.0	0.0	41.3	6.1	6.1	38.6	7.0	7.0
LnGrp LOS	C	A	A	C	A	A	D	A	A	D	A	A
Approach Vol, veh/h		160			96			628			553	
Approach Delay, s/veh		27.9			25.8			10.7			8.7	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	44.0		13.2	8.5	42.2		13.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	39.5		26.5	16.5	33.5		26.5				
Max Q Clear Time (g_c+I1), s	3.1	6.6		8.0	5.0	6.7		5.2				
Green Ext Time (p_c), s	0.0	3.5		0.8	0.1	3.2		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		12.9	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	19	116	12	8	6	81	462	20	7	462	69
Future Volume (veh/h)	110	19	116	12	8	6	81	462	20	7	462	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	131	23	138	17	11	8	89	508	22	8	502	75
Peak Hour Factor	0.84	0.84	0.84	0.72	0.72	0.72	0.91	0.91	0.91	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	170	35	209	36	76	55	113	1764	76	18	1410	210
Arrive On Green	0.10	0.15	0.15	0.02	0.08	0.08	0.07	0.53	0.53	0.01	0.48	0.48
Sat Flow, veh/h	1767	230	1378	1767	999	726	1697	3305	143	1697	2955	440
Grp Volume(v), veh/h	131	0	161	17	0	19	89	260	270	8	287	290
Grp Sat Flow(s),veh/h/ln	1767	0	1608	1767	0	1725	1697	1692	1756	1697	1692	1702
Q Serve(g_s), s	4.6	0.0	6.0	0.6	0.0	0.7	3.3	5.4	5.4	0.3	6.8	6.8
Cycle Q Clear(g_c), s	4.6	0.0	6.0	0.6	0.0	0.7	3.3	5.4	5.4	0.3	6.8	6.8
Prop In Lane	1.00		0.86	1.00		0.42	1.00		0.08	1.00		0.26
Lane Grp Cap(c), veh/h	170	0	244	36	0	132	113	903	937	18	808	812
V/C Ratio(X)	0.77	0.00	0.66	0.47	0.00	0.14	0.78	0.29	0.29	0.46	0.35	0.36
Avail Cap(c_a), veh/h	403	0	686	153	0	492	307	903	937	147	808	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	25.4	30.8	0.0	27.4	29.2	8.2	8.2	31.2	10.4	10.5
Incr Delay (d2), s/veh	7.2	0.0	3.0	9.3	0.0	0.5	11.2	0.8	0.8	17.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	2.4	0.3	0.0	0.3	1.6	1.6	1.7	0.2	2.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	0.0	28.4	40.0	0.0	27.9	40.4	9.0	8.9	48.5	11.7	11.7
LnGrp LOS	D	A	C	D	A	C	D	A	A	D	B	B
Approach Vol, veh/h		292			36			619			585	
Approach Delay, s/veh		31.5			33.6			13.5			12.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	38.4	5.8	14.2	8.7	34.8	10.6	9.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	33.9	5.5	27.1	11.5	27.9	14.5	18.1
Max Q Clear Time (g_c+I1), s	2.3	7.4	2.6	8.0	5.3	8.8	6.6	2.7
Green Ext Time (p_c), s	0.0	2.9	0.0	0.9	0.1	3.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

CUMULATIVE YEAR 2040 CONDITIONS WORKSHEETS

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	6	190	71	0	17	0	141	22	19	232	0
Future Vol, veh/h	36	6	190	71	0	17	0	141	22	19	232	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	44	7	232	87	0	21	0	172	27	23	283	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	525	528	283	519	515	186	-	0	0	199	0	0
Stage 1	329	329	-	186	186	-	-	-	-	-	-	-
Stage 2	196	199	-	333	329	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	-	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	462	454	754	466	462	854	0	-	-	1338	-	0
Stage 1	682	645	-	813	744	-	0	-	-	-	-	0
Stage 2	803	735	-	679	645	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	444	445	754	314	453	854	-	-	-	1338	-	-
Mov Cap-2 Maneuver	444	445	-	314	453	-	-	-	-	-	-	-
Stage 1	682	632	-	813	744	-	-	-	-	-	-	-
Stage 2	784	735	-	456	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	19.3	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	921	358	1338	-
HCM Lane V/C Ratio	-	-	0.307	0.3	0.017	-
HCM Control Delay (s)	-	-	10.6	19.3	7.7	0
HCM Lane LOS	-	-	B	C	A	A
HCM 95th %tile Q(veh)	-	-	1.3	1.2	0.1	-

Intersection	
Int Delay, s/veh	60.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	17	93	54	54	39	56	396	124	90	541	97
Future Vol, veh/h	20	17	93	54	54	39	56	396	124	90	541	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	22	18	101	59	59	42	61	430	135	98	588	105

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1204	1524	641	1516	1509	283	693	0	0	565	0	0
Stage 1	837	837	-	620	620	-	-	-	-	-	-	-
Stage 2	367	687	-	896	889	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.276	-	-	2.276	-	-
Pot Cap-1 Maneuver	149	117	472	89	119	712	867	-	-	970	-	-
Stage 1	358	379	-	441	477	-	-	-	-	-	-	-
Stage 2	623	445	-	332	359	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	55	87	472	~ 47	89	712	867	-	-	970	-	-
Mov Cap-2 Maneuver	55	87	-	~ 47	89	-	-	-	-	-	-	-
Stage 1	320	315	-	395	427	-	-	-	-	-	-	-
Stage 2	452	398	-	204	299	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	82.5	$ 563.8	1.2	1.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	867	-	-	172	81	970	-	-
HCM Lane V/C Ratio	0.07	-	-	0.822	1.973	0.101	-	-
HCM Control Delay (s)	9.5	0.4	-	82.5	$ 563.8	9.1	0	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	5.6	14.1	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

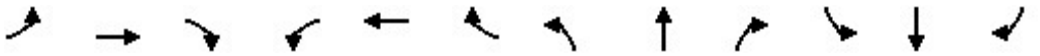
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	11	19	3	11	20	28	413	3	15	546	40
Future Vol, veh/h	26	11	19	3	11	20	28	413	3	15	546	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	3	3	3	9	8	8	8	8	8
Mvmt Flow	28	12	21	3	12	22	30	449	3	16	593	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1175	1159	615	1174	1179	451	636	0	0	452	0	0
Stage 1	647	647	-	511	511	-	-	-	-	-	-	-
Stage 2	528	512	-	663	668	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.29	7.13	6.53	6.23	4.19	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.381	3.527	4.027	3.327	2.281	-	-	2.272	-	-
Pot Cap-1 Maneuver	168	195	479	168	190	606	915	-	-	1078	-	-
Stage 1	458	465	-	543	535	-	-	-	-	-	-	-
Stage 2	532	535	-	449	455	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	148	186	479	147	181	606	915	-	-	1078	-	-
Mov Cap-2 Maneuver	148	186	-	147	181	-	-	-	-	-	-	-
Stage 1	443	458	-	525	517	-	-	-	-	-	-	-
Stage 2	485	517	-	412	448	-	-	-	-	-	-	-

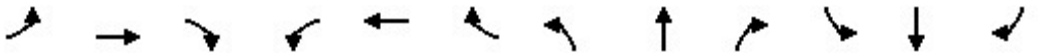
Approach	EB	WB	NB	SB
HCM Control Delay, s	30	18.8	0.6	0.2
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	915	-	-	204	298	1078	-	-
HCM Lane V/C Ratio	0.033	-	-	0.298	0.124	0.015	-	-
HCM Control Delay (s)	9.1	-	-	30	18.8	8.4	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.2	0.4	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	167	173	96	295	70	258	572	104	63	591	206
Future Volume (vph)	85	167	173	96	295	70	258	572	104	63	591	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.94			0.98			0.98			0.96	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3258			3390			3242			3211	
Flt Permitted		0.61			0.63			0.58			0.81	
Satd. Flow (perm)		2011			2165			1912			2606	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	98	192	199	110	339	80	297	657	120	72	679	237
RTOR Reduction (vph)	0	137	0	0	16	0	0	11	0	0	34	0
Lane Group Flow (vph)	0	352	0	0	513	0	0	1063	0	0	954	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.5			20.5			56.0			56.0	
Effective Green, g (s)		20.5			20.5			56.0			56.0	
Actuated g/C Ratio		0.23			0.23			0.62			0.62	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		458			493			1455			1742	
v/s Ratio Prot								c0.15			0.11	
v/s Ratio Perm		0.17			c0.24			c0.31			0.23	
v/c Ratio		0.77			1.04			0.73			0.55	
Uniform Delay, d1		32.5			34.8			11.8			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.6			51.3			3.3			1.2	
Delay (s)		40.1			86.1			15.0			11.0	
Level of Service		D			F			B			B	
Approach Delay (s)		40.1			86.1			15.0			11.0	
Approach LOS		D			F			B			B	

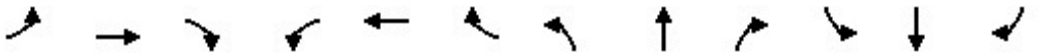
Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	25	156	26	14	14	111	805	12	11	741	80
Future Volume (veh/h)	113	25	156	26	14	14	111	805	12	11	741	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	123	27	170	28	15	15	121	875	13	12	805	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	194	48	200	201	107	83	153	1912	28	25	1493	161
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.09	0.56	0.56	0.01	0.48	0.48
Sat Flow, veh/h	520	195	810	529	435	336	1697	3414	51	1697	3081	333
Grp Volume(v), veh/h	320	0	0	58	0	0	121	434	454	12	442	450
Grp Sat Flow(s),veh/h/ln	1525	0	0	1301	0	0	1697	1692	1772	1697	1692	1722
Q Serve(g_s), s	13.1	0.0	0.0	0.0	0.0	0.0	5.3	11.4	11.4	0.5	13.8	13.8
Cycle Q Clear(g_c), s	15.1	0.0	0.0	1.9	0.0	0.0	5.3	11.4	11.4	0.5	13.8	13.8
Prop In Lane	0.38		0.53	0.48		0.26	1.00		0.03	1.00		0.19
Lane Grp Cap(c), veh/h	442	0	0	391	0	0	153	948	993	25	820	834
V/C Ratio(X)	0.72	0.00	0.00	0.15	0.00	0.00	0.79	0.46	0.46	0.48	0.54	0.54
Avail Cap(c_a), veh/h	651	0	0	586	0	0	312	948	993	115	820	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	0.0	22.2	0.0	0.0	33.6	9.8	9.8	36.9	13.6	13.6
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.2	0.0	0.0	8.7	1.6	1.5	13.6	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	0.8	0.0	0.0	2.4	4.0	4.2	0.3	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	0.0	0.0	22.3	0.0	0.0	42.3	11.4	11.3	50.5	16.1	16.1
LnGrp LOS	C	A	A	C	A	A	D	B	B	D	B	B
Approach Vol, veh/h		320			58			1009			904	
Approach Delay, s/veh		29.3			22.3			15.1			16.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	46.8		23.1	11.3	41.1		23.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	42.3		29.1	13.9	33.5		29.1				
Max Q Clear Time (g_c+I1), s	2.5	13.4		17.1	7.3	15.8		3.9				
Green Ext Time (p_c), s	0.0	6.1		1.6	0.1	5.3		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		17.8	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	31	153	28	12	11	131	724	25	17	771	121
Future Volume (veh/h)	116	31	153	28	12	11	131	724	25	17	771	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	126	34	166	30	13	12	142	787	27	18	838	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	160	43	212	55	88	81	177	1803	62	36	1337	211
Arrive On Green	0.09	0.16	0.16	0.03	0.10	0.10	0.10	0.54	0.54	0.02	0.46	0.46
Sat Flow, veh/h	1767	274	1340	1767	888	820	1697	3339	115	1697	2929	461
Grp Volume(v), veh/h	126	0	200	30	0	25	142	399	415	18	484	486
Grp Sat Flow(s),veh/h/ln	1767	0	1614	1767	0	1708	1697	1692	1761	1697	1692	1698
Q Serve(g_s), s	5.0	0.0	8.6	1.2	0.0	1.0	5.9	10.2	10.2	0.8	15.7	15.7
Cycle Q Clear(g_c), s	5.0	0.0	8.6	1.2	0.0	1.0	5.9	10.2	10.2	0.8	15.7	15.7
Prop In Lane	1.00		0.83	1.00		0.48	1.00		0.07	1.00		0.27
Lane Grp Cap(c), veh/h	160	0	256	55	0	169	177	914	951	36	773	775
V/C Ratio(X)	0.79	0.00	0.78	0.54	0.00	0.15	0.80	0.44	0.44	0.51	0.63	0.63
Avail Cap(c_a), veh/h	242	0	492	144	0	426	270	914	951	120	773	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	0.0	29.2	34.5	0.0	29.7	31.6	10.0	10.0	35.0	14.9	14.9
Incr Delay (d2), s/veh	9.3	0.0	5.2	8.0	0.0	0.4	9.5	1.5	1.5	10.7	3.8	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	3.6	0.6	0.0	0.4	2.7	3.3	3.5	0.4	5.8	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	0.0	34.4	42.5	0.0	30.1	41.1	11.5	11.5	45.6	18.8	18.7
LnGrp LOS	D	A	C	D	A	C	D	B	B	D	B	B
Approach Vol, veh/h		326			55			956			988	
Approach Delay, s/veh		37.1			36.9			15.9			19.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	43.5	6.8	15.9	12.0	37.5	11.0	11.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	39.0	5.9	22.0	11.5	32.6	9.9	18.0
Max Q Clear Time (g_c+I1), s	2.8	12.2	3.2	10.6	7.9	17.7	7.0	3.0
Green Ext Time (p_c), s	0.0	4.9	0.0	0.8	0.1	5.1	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	31	22	0	19	0	210	23	15	255	0
Future Vol, veh/h	0	0	31	22	0	19	0	210	23	15	255	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	0	0	34	24	0	21	0	228	25	16	277	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	562	277	550	550	241	-	0	0	253	0	0
Stage 1	309	309	-	241	241	-	-	-	-	-	-	-
Stage 2	251	253	-	309	309	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	-	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	437	434	759	444	441	795	0	-	-	1278	-	0
Stage 1	699	658	-	760	704	-	0	-	-	-	-	0
Stage 2	751	696	-	699	658	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	421	427	759	420	434	795	-	-	-	1278	-	-
Mov Cap-2 Maneuver	421	427	-	420	434	-	-	-	-	-	-	-
Stage 1	699	648	-	760	704	-	-	-	-	-	-	-
Stage 2	731	696	-	658	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	12.3	0	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	759	537	1278	-
HCM Lane V/C Ratio	-	-	0.044	0.083	0.013	-
HCM Control Delay (s)	-	-	10	12.3	7.9	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	32	91	29	19	15	83	332	45	19	357	49
Future Vol, veh/h	37	32	91	29	19	15	83	332	45	19	357	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	40	35	99	32	21	16	90	361	49	21	388	53

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	828	1047	415	1090	1049	205	441	0	0	410	0	0
Stage 1	457	457	-	566	566	-	-	-	-	-	-	-
Stage 2	371	590	-	524	483	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.276	-	-	2.276	-	-
Pot Cap-1 Maneuver	275	226	634	180	225	799	1081	-	-	1110	-	-
Stage 1	580	565	-	475	504	-	-	-	-	-	-	-
Stage 2	620	492	-	533	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	223	196	634	118	196	799	1081	-	-	1110	-	-
Mov Cap-2 Maneuver	223	196	-	118	196	-	-	-	-	-	-	-
Stage 1	517	551	-	423	449	-	-	-	-	-	-	-
Stage 2	516	438	-	411	536	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	38.5	1.8	0.4
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1081	-	-	338	174	1110	-	-
HCM Lane V/C Ratio	0.083	-	-	0.515	0.394	0.019	-	-
HCM Control Delay (s)	8.6	0.3	-	26.4	38.5	8.3	0	-
HCM Lane LOS	A	A	-	D	E	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	2.8	1.7	0.1	-	-

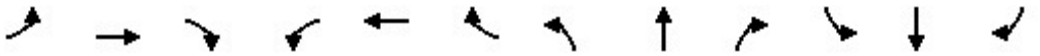
Intersection	
Int Delay, s/veh	17.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑		↰	↑	
Traffic Vol, veh/h	68	17	19	6	23	51	36	584	8	45	512	32
Future Vol, veh/h	68	17	19	6	23	51	36	584	8	45	512	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	3	3	3	9	8	8	8	8	8
Mvmt Flow	74	18	21	7	25	55	39	635	9	49	557	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1431	1395	575	1410	1408	640	592	0	0	644	0	0
Stage 1	673	673	-	718	718	-	-	-	-	-	-	-
Stage 2	758	722	-	692	690	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.29	7.13	6.53	6.23	4.19	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.381	3.527	4.027	3.327	2.281	-	-	2.272	-	-
Pot Cap-1 Maneuver	112	141	505	115	138	474	950	-	-	913	-	-
Stage 1	443	452	-	419	432	-	-	-	-	-	-	-
Stage 2	398	430	-	433	445	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	128	505	91	125	474	950	-	-	913	-	-
Mov Cap-2 Maneuver	78	128	-	91	125	-	-	-	-	-	-	-
Stage 1	425	428	-	402	414	-	-	-	-	-	-	-
Stage 2	317	412	-	376	421	-	-	-	-	-	-	-

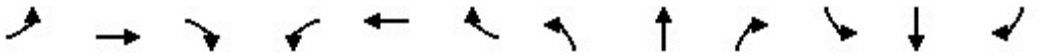
Approach	EB	WB	NB	SB
HCM Control Delay, s	208.8	30.9	0.5	0.7
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	950	-	-	100	224	913	-	-
HCM Lane V/C Ratio	0.041	-	-	1.13	0.388	0.054	-	-
HCM Control Delay (s)	9	-	-	208.8	30.9	9.2	-	-
HCM Lane LOS	A	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	7.4	1.7	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	252	286	88	257	66	298	377	127	73	485	162
Future Volume (vph)	63	252	286	88	257	66	298	377	127	73	485	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.93			0.98			0.98			0.97	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		3238			3384			3204			3214	
Flt Permitted		0.77			0.56			0.59			0.79	
Satd. Flow (perm)		2514			1901			1912			2549	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	72	290	329	101	295	76	343	433	146	84	557	186
RTOR Reduction (vph)	0	189	0	0	18	0	0	17	0	0	29	0
Lane Group Flow (vph)	0	502	0	0	454	0	0	905	0	0	798	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.6			23.6			50.1			50.1	
Effective Green, g (s)		23.6			23.6			50.1			50.1	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		680			514			1365			1601	
v/s Ratio Prot								c0.14			0.10	
v/s Ratio Perm		0.20			c0.24			c0.24			0.18	
v/c Ratio		0.74			0.88			0.66			0.50	
Uniform Delay, d1		29.0			30.5			12.8			11.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.2			16.3			2.6			1.1	
Delay (s)		33.2			46.8			15.3			12.2	
Level of Service		C			D			B			B	
Approach Delay (s)		33.2			46.8			15.3			12.2	
Approach LOS		C			D			B			B	

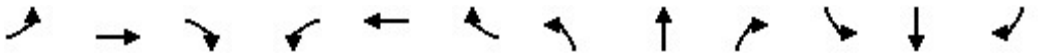
Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	29	131	32	36	37	116	724	53	46	697	77
Future Volume (veh/h)	65	29	131	32	36	37	116	724	53	46	697	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	71	32	142	35	39	40	126	787	58	50	758	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	130	56	172	125	132	105	160	1886	139	73	1656	183
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.59	0.59	0.04	0.54	0.54
Sat Flow, veh/h	366	299	917	332	704	560	1697	3196	235	1697	3072	340
Grp Volume(v), veh/h	245	0	0	114	0	0	126	417	428	50	417	425
Grp Sat Flow(s),veh/h/ln	1582	0	0	1595	0	0	1697	1692	1739	1697	1692	1720
Q Serve(g_s), s	6.8	0.0	0.0	0.0	0.0	0.0	5.5	10.1	10.1	2.2	11.4	11.4
Cycle Q Clear(g_c), s	11.1	0.0	0.0	4.3	0.0	0.0	5.5	10.1	10.1	2.2	11.4	11.4
Prop In Lane	0.29		0.58	0.31		0.35	1.00		0.14	1.00		0.20
Lane Grp Cap(c), veh/h	359	0	0	362	0	0	160	999	1026	73	912	927
V/C Ratio(X)	0.68	0.00	0.00	0.31	0.00	0.00	0.79	0.42	0.42	0.68	0.46	0.46
Avail Cap(c_a), veh/h	566	0	0	569	0	0	349	999	1026	169	912	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	0.0	0.0	26.6	0.0	0.0	33.4	8.4	8.4	35.6	10.6	10.6
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.5	0.0	0.0	8.3	1.3	1.3	10.8	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.0	1.8	0.0	0.0	2.5	3.4	3.5	1.1	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	0.0	0.0	27.1	0.0	0.0	41.7	9.7	9.7	46.3	12.3	12.3
LnGrp LOS	C	A	A	C	A	A	D	A	A	D	B	B
Approach Vol, veh/h		245			114			971			892	
Approach Delay, s/veh		31.5			27.1			13.8			14.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	49.0		18.7	11.6	45.1		18.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	44.5		24.5	15.5	36.5		24.5				
Max Q Clear Time (g_c+I1), s	4.2	12.1		13.1	7.5	13.4		6.3				
Green Ext Time (p_c), s	0.0	5.9		1.1	0.2	5.5		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		16.6	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	29	179	19	12	9	125	714	31	11	714	107
Future Volume (veh/h)	170	29	179	19	12	9	125	714	31	11	714	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	185	32	195	21	13	10	136	776	34	12	776	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	229	41	249	42	73	56	171	1714	75	25	1279	191
Arrive On Green	0.13	0.18	0.18	0.02	0.07	0.07	0.10	0.52	0.52	0.01	0.43	0.43
Sat Flow, veh/h	1767	227	1381	1767	973	748	1697	3303	145	1697	2953	441
Grp Volume(v), veh/h	185	0	227	21	0	23	136	398	412	12	445	447
Grp Sat Flow(s),veh/h/ln	1767	0	1607	1767	0	1721	1697	1692	1755	1697	1692	1702
Q Serve(g_s), s	7.0	0.0	9.3	0.8	0.0	0.9	5.4	10.2	10.2	0.5	13.9	13.9
Cycle Q Clear(g_c), s	7.0	0.0	9.3	0.8	0.0	0.9	5.4	10.2	10.2	0.5	13.9	13.9
Prop In Lane	1.00		0.86	1.00		0.43	1.00		0.08	1.00		0.26
Lane Grp Cap(c), veh/h	229	0	290	42	0	129	171	878	911	25	733	737
V/C Ratio(X)	0.81	0.00	0.78	0.49	0.00	0.18	0.80	0.45	0.45	0.47	0.61	0.61
Avail Cap(c_a), veh/h	347	0	607	141	0	450	264	878	911	123	733	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	26.9	33.2	0.0	29.8	30.3	10.4	10.4	33.6	15.0	15.0
Incr Delay (d2), s/veh	8.1	0.0	4.6	8.6	0.0	0.7	9.0	1.7	1.6	13.2	3.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	3.7	0.4	0.0	0.4	2.4	3.3	3.4	0.3	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	31.5	41.8	0.0	30.5	39.3	12.1	12.0	46.8	18.7	18.7
LnGrp LOS	D	A	C	D	A	C	D	B	B	D	B	B
Approach Vol, veh/h		412			44			946			904	
Approach Delay, s/veh		34.0			35.9			16.0			19.1	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	40.2	6.2	16.9	11.4	34.3	13.4	9.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	35.5	5.5	26.0	10.7	29.8	13.5	18.0
Max Q Clear Time (g_c+I1), s	2.5	12.2	2.8	11.3	7.4	15.9	9.0	2.9
Green Ext Time (p_c), s	0.0	4.7	0.0	1.2	0.1	4.4	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	7	201	75	0	18	0	148	23	20	245	0
Future Vol, veh/h	38	7	201	75	0	18	0	148	23	20	245	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	46	9	245	91	0	22	0	180	28	24	299	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	552	555	299	546	541	194	-	0	0	208	0	0
Stage 1	347	347	-	194	194	-	-	-	-	-	-	-
Stage 2	205	208	-	352	347	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	-	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	443	439	738	447	447	845	0	-	-	1328	-	0
Stage 1	667	633	-	805	738	-	0	-	-	-	-	0
Stage 2	795	728	-	663	633	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	424	429	738	289	437	845	-	-	-	1328	-	-
Mov Cap-2 Maneuver	424	429	-	289	437	-	-	-	-	-	-	-
Stage 1	667	619	-	805	738	-	-	-	-	-	-	-
Stage 2	774	728	-	427	619	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	21.4	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	331	1328	-
HCM Lane V/C Ratio	-	-	0.332	0.343	0.018	-
HCM Control Delay (s)	-	-	11	21.4	7.8	0
HCM Lane LOS	-	-	B	C	A	A
HCM 95th %tile Q(veh)	-	-	1.5	1.5	0.1	-

Intersection	
Int Delay, s/veh	95.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	18	98	57	57	41	59	418	131	95	571	103
Future Vol, veh/h	21	18	98	57	57	41	59	418	131	95	571	103
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	23	20	107	62	62	45	64	454	142	103	621	112

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1269	1607	677	1600	1592	298	733	0	0	596	0	0
Stage 1	883	883	-	653	653	-	-	-	-	-	-	-
Stage 2	386	724	-	947	939	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.276	-	-	2.276	-	-
Pot Cap-1 Maneuver	134	104	450	77	106	696	837	-	-	944	-	-
Stage 1	338	361	-	421	461	-	-	-	-	-	-	-
Stage 2	607	428	-	311	340	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	75	450	~ 37	76	696	837	-	-	944	-	-
Mov Cap-2 Maneuver	33	75	-	~ 37	76	-	-	-	-	-	-	-
Stage 1	298	293	-	372	407	-	-	-	-	-	-	-
Stage 2	425	378	-	180	276	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	208.3	$ 838.7	1.2	1.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	837	-	-	125	66	944	-	-
HCM Lane V/C Ratio	0.077	-	-	1.191	2.553	0.109	-	-
HCM Control Delay (s)	9.7	0.4	-	208.3	$ 838.7	9.3	0	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	9.1	16.6	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

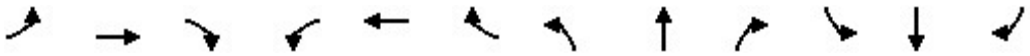
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	11	20	3	11	21	29	436	3	16	576	42
Future Vol, veh/h	28	11	20	3	11	21	29	436	3	16	576	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	3	3	3	9	8	8	8	8	8
Mvmt Flow	30	12	22	3	12	23	32	474	3	17	626	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1240	1224	649	1240	1246	476	672	0	0	477	0	0
Stage 1	683	683	-	540	540	-	-	-	-	-	-	-
Stage 2	557	541	-	700	706	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.29	7.13	6.53	6.23	4.19	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.381	3.527	4.027	3.327	2.281	-	-	2.272	-	-
Pot Cap-1 Maneuver	151	178	458	151	173	587	887	-	-	1055	-	-
Stage 1	438	448	-	524	520	-	-	-	-	-	-	-
Stage 2	513	519	-	428	437	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	132	169	458	131	164	587	887	-	-	1055	-	-
Mov Cap-2 Maneuver	132	169	-	131	164	-	-	-	-	-	-	-
Stage 1	422	441	-	505	501	-	-	-	-	-	-	-
Stage 2	464	500	-	390	430	-	-	-	-	-	-	-

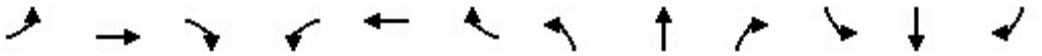
Approach	EB	WB	NB	SB
HCM Control Delay, s	34.7	20	0.6	0.2
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	887	-	-	184	278	1055	-	-
HCM Lane V/C Ratio	0.036	-	-	0.349	0.137	0.016	-	-
HCM Control Delay (s)	9.2	-	-	34.7	20	8.5	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0.5	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	176	183	101	312	73	272	604	109	67	623	217
Future Volume (vph)	90	176	183	101	312	73	272	604	109	67	623	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.94			0.98			0.98			0.96	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		3258			3391			3242			3211	
Flt Permitted		0.59			0.62			0.57			0.79	
Satd. Flow (perm)		1954			2112			1882			2554	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	103	202	210	116	359	84	313	694	125	77	716	249
RTOR Reduction (vph)	0	137	0	0	16	0	0	11	0	0	33	0
Lane Group Flow (vph)	0	378	0	0	543	0	0	1121	0	0	1009	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.5			20.5			56.0			56.0	
Effective Green, g (s)		20.5			20.5			56.0			56.0	
Actuated g/C Ratio		0.23			0.23			0.62			0.62	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		445			481			1443			1720	
v/s Ratio Prot								c0.16			0.12	
v/s Ratio Perm		0.19			c0.26			c0.33			0.25	
v/c Ratio		0.85			1.13			0.78			0.59	
Uniform Delay, d1		33.3			34.8			12.4			10.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		14.0			81.2			4.2			1.5	
Delay (s)		47.2			116.0			16.6			11.6	
Level of Service		D			F			B			B	
Approach Delay (s)		47.2			116.0			16.6			11.6	
Approach LOS		D			F			B			B	

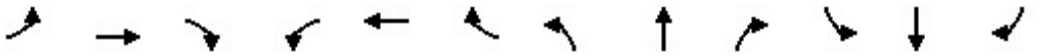
Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	26	165	28	15	15	117	850	13	11	781	85
Future Volume (veh/h)	119	26	165	28	15	15	117	850	13	11	781	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	129	28	179	30	16	16	127	924	14	12	849	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	199	48	208	204	108	84	160	1887	29	25	1457	158
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.09	0.55	0.55	0.01	0.47	0.47
Sat Flow, veh/h	524	189	813	525	423	330	1697	3413	52	1697	3080	334
Grp Volume(v), veh/h	336	0	0	62	0	0	127	458	480	12	466	475
Grp Sat Flow(s),veh/h/ln	1526	0	0	1278	0	0	1697	1692	1772	1697	1692	1721
Q Serve(g_s), s	14.0	0.0	0.0	0.0	0.0	0.0	5.6	12.7	12.7	0.5	15.3	15.3
Cycle Q Clear(g_c), s	16.0	0.0	0.0	2.1	0.0	0.0	5.6	12.7	12.7	0.5	15.3	15.3
Prop In Lane	0.38		0.53	0.48		0.26	1.00		0.03	1.00		0.19
Lane Grp Cap(c), veh/h	456	0	0	397	0	0	160	936	980	25	801	814
V/C Ratio(X)	0.74	0.00	0.00	0.16	0.00	0.00	0.79	0.49	0.49	0.48	0.58	0.58
Avail Cap(c_a), veh/h	643	0	0	570	0	0	308	936	980	113	801	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	0.0	21.9	0.0	0.0	33.9	10.5	10.5	37.4	14.7	14.7
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.2	0.0	0.0	8.5	1.8	1.8	13.6	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.0	0.9	0.0	0.0	2.6	4.5	4.7	0.3	5.9	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	0.0	0.0	22.1	0.0	0.0	42.4	12.3	12.2	51.0	17.8	17.7
LnGrp LOS	C	A	A	C	A	A	D	B	B	D	B	B
Approach Vol, veh/h		336			62			1065			953	
Approach Delay, s/veh		29.7			22.1			15.9			18.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	46.8		24.1	11.7	40.7		24.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	42.3		29.1	13.9	33.5		29.1				
Max Q Clear Time (g_c+I1), s	2.5	14.7		18.0	7.6	17.3		4.1				
Green Ext Time (p_c), s	0.0	6.5		1.6	0.1	5.5		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		18.9	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	33	162	29	13	11	139	764	26	18	814	127
Future Volume (veh/h)	122	33	162	29	13	11	139	764	26	18	814	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	133	36	176	32	14	12	151	830	28	20	885	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	168	45	222	58	95	81	187	1781	60	39	1307	204
Arrive On Green	0.10	0.17	0.17	0.03	0.10	0.10	0.11	0.53	0.53	0.02	0.45	0.45
Sat Flow, veh/h	1767	274	1340	1767	922	791	1697	3341	113	1697	2934	457
Grp Volume(v), veh/h	133	0	212	32	0	26	151	420	438	20	510	513
Grp Sat Flow(s),veh/h/ln	1767	0	1614	1767	0	1713	1697	1692	1761	1697	1692	1699
Q Serve(g_s), s	5.4	0.0	9.2	1.3	0.0	1.0	6.4	11.3	11.3	0.9	17.5	17.5
Cycle Q Clear(g_c), s	5.4	0.0	9.2	1.3	0.0	1.0	6.4	11.3	11.3	0.9	17.5	17.5
Prop In Lane	1.00		0.83	1.00		0.46	1.00		0.06	1.00		0.27
Lane Grp Cap(c), veh/h	168	0	267	58	0	177	187	902	939	39	754	757
V/C Ratio(X)	0.79	0.00	0.79	0.55	0.00	0.15	0.81	0.47	0.47	0.52	0.68	0.68
Avail Cap(c_a), veh/h	239	0	485	142	0	421	267	902	939	118	754	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	29.3	34.9	0.0	29.9	31.8	10.6	10.6	35.4	16.1	16.1
Incr Delay (d2), s/veh	11.0	0.0	5.3	8.0	0.0	0.4	11.4	1.7	1.7	10.2	4.8	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	3.8	0.7	0.0	0.4	3.0	3.7	3.9	0.4	6.7	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	0.0	34.6	42.9	0.0	30.3	43.2	12.3	12.3	45.6	20.9	20.9
LnGrp LOS	D	A	C	D	A	C	D	B	B	D	C	C
Approach Vol, veh/h		345			58			1009			1043	
Approach Delay, s/veh		38.0			37.2			16.9			21.4	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	43.5	6.9	16.6	12.6	37.1	11.5	12.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	39.0	5.9	22.0	11.5	32.6	9.9	18.0
Max Q Clear Time (g_c+I1), s	2.9	13.3	3.3	11.2	8.4	19.5	7.4	3.0
Green Ext Time (p_c), s	0.0	5.2	0.0	0.9	0.1	5.0	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	33	23	0	20	0	222	24	16	269	0
Future Vol, veh/h	0	0	33	23	0	20	0	222	24	16	269	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	0	0	36	25	0	22	0	241	26	17	292	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	591	593	292	580	580	254	-	0	0	267	0	0
Stage 1	326	326	-	254	254	-	-	-	-	-	-	-
Stage 2	265	267	-	326	326	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	-	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	-	-	-	2.272	-	-
Pot Cap-1 Maneuver	417	417	745	424	424	782	0	-	-	1263	-	0
Stage 1	684	647	-	748	695	-	0	-	-	-	-	0
Stage 2	738	686	-	684	647	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	400	410	745	399	417	782	-	-	-	1263	-	-
Mov Cap-2 Maneuver	400	410	-	399	417	-	-	-	-	-	-	-
Stage 1	684	637	-	748	695	-	-	-	-	-	-	-
Stage 2	717	686	-	641	637	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	12.7	0	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	745	517	1263	-
HCM Lane V/C Ratio	-	-	0.048	0.09	0.014	-
HCM Control Delay (s)	-	-	10.1	12.7	7.9	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0	-

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	39	34	96	31	20	16	88	351	47	20	377	52
Future Vol, veh/h	39	34	96	31	20	16	88	351	47	20	377	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	42	37	104	34	22	17	96	382	51	22	410	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	877	1108	439	1153	1111	217	467	0	0	433	0	0
Stage 1	483	483	-	600	600	-	-	-	-	-	-	-
Stage 2	394	625	-	553	511	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.276	-	-	2.276	-	-
Pot Cap-1 Maneuver	254	208	614	162	207	785	1057	-	-	1088	-	-
Stage 1	562	550	-	453	487	-	-	-	-	-	-	-
Stage 2	601	474	-	514	534	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	200	178	614	101	177	785	1057	-	-	1088	-	-
Mov Cap-2 Maneuver	200	178	-	101	177	-	-	-	-	-	-	-
Stage 1	495	535	-	399	429	-	-	-	-	-	-	-
Stage 2	491	417	-	386	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.8	48.8	1.8	0.4
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1057	-	-	312	152	1088	-	-
HCM Lane V/C Ratio	0.09	-	-	0.589	0.479	0.02	-	-
HCM Control Delay (s)	8.7	0.3	-	31.8	48.8	8.4	0	-
HCM Lane LOS	A	A	-	D	E	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	3.5	2.2	0.1	-	-

Intersection	
Int Delay, s/veh	26.9

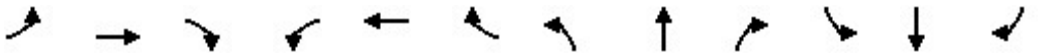
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	18	20	7	24	54	38	617	8	47	540	34
Future Vol, veh/h	72	18	20	7	24	54	38	617	8	47	540	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	3	3	3	9	8	8	8	8	8
Mvmt Flow	78	20	22	8	26	59	41	671	9	51	587	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1508	1470	606	1487	1484	676	624	0	0	680	0	0
Stage 1	708	708	-	758	758	-	-	-	-	-	-	-
Stage 2	800	762	-	729	726	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.29	7.13	6.53	6.23	4.19	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.381	3.527	4.027	3.327	2.281	-	-	2.272	-	-
Pot Cap-1 Maneuver	99	127	484	102	124	452	924	-	-	885	-	-
Stage 1	424	436	-	398	414	-	-	-	-	-	-	-
Stage 2	377	412	-	413	428	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 66	114	484	78	112	452	924	-	-	885	-	-
Mov Cap-2 Maneuver	~ 66	114	-	78	112	-	-	-	-	-	-	-
Stage 1	405	411	-	380	396	-	-	-	-	-	-	-
Stage 2	293	394	-	354	403	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 326.4	37.3	0.5	0.7
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	924	-	-	85	201	885	-	-
HCM Lane V/C Ratio	0.045	-	-	1.407	0.46	0.058	-	-
HCM Control Delay (s)	9.1	-	-	$ 326.4	37.3	9.3	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	9.2	2.2	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

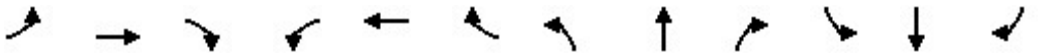


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	266	302	93	271	70	315	398	134	77	512	171
Future Volume (vph)	67	266	302	93	271	70	315	398	134	77	512	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.93			0.98			0.98			0.97	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		3238			3384			3204			3213	
Flt Permitted		0.76			0.55			0.58			0.77	
Satd. Flow (perm)		2458			1865			1884			2497	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	77	306	347	107	311	80	362	457	154	89	589	197
RTOR Reduction (vph)	0	186	0	0	18	0	0	17	0	0	29	0
Lane Group Flow (vph)	0	544	0	0	480	0	0	956	0	0	846	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.9			24.9			50.0			50.0	
Effective Green, g (s)		24.9			24.9			50.0			50.0	
Actuated g/C Ratio		0.28			0.28			0.57			0.57	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		692			525			1334			1558	
v/s Ratio Prot								c0.15			0.11	
v/s Ratio Perm		0.22			c0.26			c0.26			0.20	
v/c Ratio		0.79			0.95dl			0.72			0.54	
Uniform Delay, d1		29.3			30.7			14.0			12.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.9			20.5			3.3			1.4	
Delay (s)		35.2			51.2			17.4			13.4	
Level of Service		D			D			B			B	
Approach Delay (s)		35.2			51.2			17.4			13.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

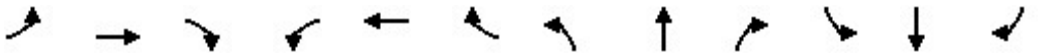
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	31	139	34	38	39	122	764	55	49	736	82
Future Volume (veh/h)	69	31	139	34	38	39	122	764	55	49	736	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	75	34	151	37	41	42	133	830	60	53	800	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	133	58	181	127	135	108	168	1864	135	75	1620	180
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.58	0.58	0.04	0.53	0.53
Sat Flow, veh/h	368	296	919	332	685	548	1697	3201	231	1697	3071	342
Grp Volume(v), veh/h	260	0	0	120	0	0	133	439	451	53	441	448
Grp Sat Flow(s),veh/h/ln	1582	0	0	1565	0	0	1697	1692	1740	1697	1692	1720
Q Serve(g_s), s	7.3	0.0	0.0	0.0	0.0	0.0	5.9	11.2	11.2	2.4	12.7	12.7
Cycle Q Clear(g_c), s	11.9	0.0	0.0	4.6	0.0	0.0	5.9	11.2	11.2	2.4	12.7	12.7
Prop In Lane	0.29		0.58	0.31		0.35	1.00		0.13	1.00		0.20
Lane Grp Cap(c), veh/h	372	0	0	369	0	0	168	986	1013	75	893	908
V/C Ratio(X)	0.70	0.00	0.00	0.32	0.00	0.00	0.79	0.45	0.45	0.71	0.49	0.49
Avail Cap(c_a), veh/h	560	0	0	556	0	0	344	986	1013	167	893	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	0.0	26.5	0.0	0.0	33.7	9.0	9.0	36.0	11.5	11.5
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.5	0.0	0.0	8.1	1.5	1.4	11.5	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	0.0	1.9	0.0	0.0	2.7	3.8	3.9	1.2	4.6	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	0.0	27.0	0.0	0.0	41.8	10.5	10.4	47.5	13.5	13.4
LnGrp LOS	C	A	A	C	A	A	D	B	B	D	B	B
Approach Vol, veh/h		260			120			1023			942	
Approach Delay, s/veh		31.6			27.0			14.5			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	49.0		19.5	12.1	44.8		19.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	44.5		24.5	15.5	36.5		24.5				
Max Q Clear Time (g_c+I1), s	4.4	13.2		13.9	7.9	14.7		6.6				
Green Ext Time (p_c), s	0.0	6.3		1.1	0.2	5.8		0.6				

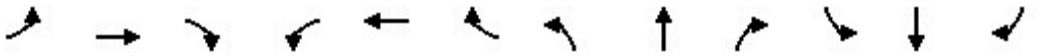
Intersection Summary			
HCM 6th Ctrl Delay		17.4	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	31	189	20	13	10	132	754	33	11	754	113
Future Volume (veh/h)	179	31	189	20	13	10	132	754	33	11	754	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	195	34	205	22	14	11	143	820	36	12	820	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	239	43	259	44	74	58	179	1703	75	25	1255	188
Arrive On Green	0.14	0.19	0.19	0.02	0.08	0.08	0.11	0.52	0.52	0.01	0.43	0.43
Sat Flow, veh/h	1767	229	1379	1767	963	757	1697	3303	145	1697	2951	443
Grp Volume(v), veh/h	195	0	239	22	0	25	143	420	436	12	470	473
Grp Sat Flow(s),veh/h/ln	1767	0	1607	1767	0	1719	1697	1692	1755	1697	1692	1702
Q Serve(g_s), s	7.5	0.0	9.9	0.9	0.0	1.0	5.8	11.2	11.2	0.5	15.5	15.5
Cycle Q Clear(g_c), s	7.5	0.0	9.9	0.9	0.0	1.0	5.8	11.2	11.2	0.5	15.5	15.5
Prop In Lane	1.00		0.86	1.00		0.44	1.00		0.08	1.00		0.26
Lane Grp Cap(c), veh/h	239	0	302	44	0	133	179	873	905	25	720	724
V/C Ratio(X)	0.81	0.00	0.79	0.50	0.00	0.19	0.80	0.48	0.48	0.48	0.65	0.65
Avail Cap(c_a), veh/h	341	0	597	139	0	442	259	873	905	121	720	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	27.2	33.7	0.0	30.3	30.6	10.9	10.9	34.2	16.0	16.0
Incr Delay (d2), s/veh	9.8	0.0	4.7	8.6	0.0	0.7	10.8	1.9	1.8	13.3	4.6	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	4.0	0.5	0.0	0.4	2.7	3.7	3.9	0.3	5.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	31.8	42.3	0.0	31.0	41.4	12.8	12.8	47.5	20.6	20.6
LnGrp LOS	D	A	C	D	A	C	D	B	B	D	C	C
Approach Vol, veh/h		434			47			999			955	
Approach Delay, s/veh		35.2			36.3			16.9			20.9	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	40.6	6.2	17.6	11.9	34.3	14.0	9.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	35.5	5.5	26.0	10.7	29.8	13.5	18.0
Max Q Clear Time (g_c+I1), s	2.5	13.2	2.9	11.9	7.8	17.5	9.5	3.0
Green Ext Time (p_c), s	0.0	5.0	0.0	1.2	0.1	4.4	0.2	0.0

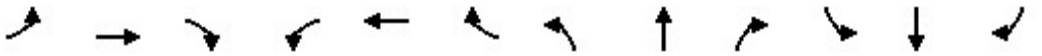
Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	17	93	54	54	39	56	396	124	90	541	97
Future Volume (veh/h)	20	17	93	54	54	39	56	396	124	90	541	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	22	18	101	59	59	42	61	430	135	98	588	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	134	44	174	204	108	65	226	1367	414	184	771	130
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	166	301	1179	503	727	438	183	2224	673	126	1254	211
Grp Volume(v), veh/h	141	0	0	160	0	0	325	0	301	791	0	0
Grp Sat Flow(s),veh/h/ln	1645	0	0	1668	0	0	1580	0	1500	1591	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	3.7	5.9	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	3.2	0.0	0.0	3.3	0.0	3.7	13.5	0.0	0.0
Prop In Lane	0.16		0.72	0.37		0.26	0.19		0.45	0.12		0.13
Lane Grp Cap(c), veh/h	353	0	0	377	0	0	1084	0	922	1085	0	0
V/C Ratio(X)	0.40	0.00	0.00	0.42	0.00	0.00	0.30	0.00	0.33	0.73	0.00	0.00
Avail Cap(c_a), veh/h	859	0	0	873	0	0	2541	0	2492	2672	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.0	0.0	0.0	15.1	0.0	0.0	3.4	0.0	3.5	5.3	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.2	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	1.2	0.0	0.0	0.4	0.0	0.4	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	0.0	15.9	0.0	0.0	3.6	0.0	3.7	6.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		141			160			626			791	
Approach Delay, s/veh		15.8			15.9			3.7			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.8		10.1		27.8		10.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.0		18.0		63.0		18.0				
Max Q Clear Time (g_c+I1), s		5.7		4.9		15.5		5.2				
Green Ext Time (p_c), s		4.8		0.6		7.8		0.7				

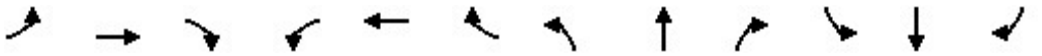
Intersection Summary												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	11	19	3	11	20	28	413	3	15	546	40
Future Volume (veh/h)	26	11	19	3	11	20	28	413	3	15	546	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1767	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	28	12	21	3	12	22	30	449	3	16	593	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	9	8	8	8	8	8
Cap, veh/h	214	30	48	122	51	88	61	883	6	35	794	58
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.50	0.50	0.02	0.48	0.48
Sat Flow, veh/h	701	335	544	101	577	994	1682	1768	12	1697	1641	119
Grp Volume(v), veh/h	61	0	0	37	0	0	30	0	452	16	0	636
Grp Sat Flow(s),veh/h/ln	1580	0	0	1673	0	0	1682	0	1779	1697	0	1760
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	5.9	0.3	0.0	10.1
Cycle Q Clear(g_c), s	1.2	0.0	0.0	0.7	0.0	0.0	0.6	0.0	5.9	0.3	0.0	10.1
Prop In Lane	0.46		0.34	0.08		0.59	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	292	0	0	260	0	0	61	0	889	35	0	852
V/C Ratio(X)	0.21	0.00	0.00	0.14	0.00	0.00	0.49	0.00	0.51	0.46	0.00	0.75
Avail Cap(c_a), veh/h	969	0	0	992	0	0	317	0	2709	271	0	2628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	0.0	14.7	0.0	0.0	16.3	0.0	5.8	16.7	0.0	7.2
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	0.0	0.0	6.0	0.0	0.5	9.1	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.9	0.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	0.0	14.9	0.0	0.0	22.3	0.0	6.2	25.8	0.0	8.5
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		61			37			482			652	
Approach Delay, s/veh		15.2			14.9			7.2			8.9	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	21.7		7.5	5.7	21.2		7.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	52.5		18.5	6.5	51.5		18.5				
Max Q Clear Time (g_c+I1), s	2.3	7.9		3.2	2.6	12.1		2.7				
Green Ext Time (p_c), s	0.0	2.8		0.2	0.0	4.6		0.1				

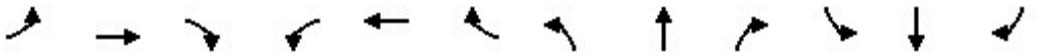
Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	32	91	29	19	15	83	332	45	19	357	49
Future Volume (veh/h)	37	32	91	29	19	15	83	332	45	19	357	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	40	35	99	32	21	16	90	361	49	21	388	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	242	72	162	328	127	69	348	1064	140	176	644	85
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	283	402	904	561	706	382	323	2459	323	32	1488	197
Grp Volume(v), veh/h	174	0	0	69	0	0	263	0	237	462	0	0
Grp Sat Flow(s),veh/h/ln	1590	0	0	1649	0	0	1543	0	1563	1717	0	0
Q Serve(g_s), s	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0	0.8	0.0	0.0	2.3	0.0	2.4	4.7	0.0	0.0
Prop In Lane	0.23		0.57	0.46		0.23	0.34		0.21	0.05		0.11
Lane Grp Cap(c), veh/h	476	0	0	523	0	0	876	0	676	905	0	0
V/C Ratio(X)	0.37	0.00	0.00	0.13	0.00	0.00	0.30	0.00	0.35	0.51	0.00	0.00
Avail Cap(c_a), veh/h	1914	0	0	1867	0	0	3494	0	3737	4189	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.7	0.0	0.0	8.1	0.0	0.0	4.4	0.0	4.4	5.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.3	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.2	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	0.0	8.2	0.0	0.0	4.6	0.0	4.7	5.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		174			69			500			462	
Approach Delay, s/veh		9.2			8.2			4.6			5.5	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.5		8.7		14.5		8.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		55.5		25.5		55.5		25.5				
Max Q Clear Time (g_c+I1), s		4.4		4.3		6.7		2.8				
Green Ext Time (p_c), s		3.6		1.0		3.3		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			5.8									
HCM 6th LOS			A									



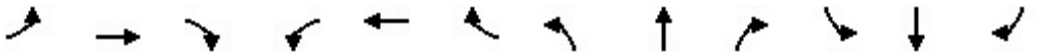
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	17	19	6	23	51	36	584	8	45	512	32
Future Volume (veh/h)	68	17	19	6	23	51	36	584	8	45	512	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1767	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	74	18	21	7	25	55	39	635	9	49	557	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	9	8	8	8	8	8
Cap, veh/h	275	33	34	113	62	123	75	826	12	90	796	50
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.04	0.47	0.47	0.05	0.48	0.48
Sat Flow, veh/h	1003	280	293	82	533	1057	1682	1752	25	1697	1658	104
Grp Volume(v), veh/h	113	0	0	87	0	0	39	0	644	49	0	592
Grp Sat Flow(s),veh/h/ln	1576	0	0	1673	0	0	1682	0	1777	1697	0	1763
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.9	0.0	11.3	1.1	0.0	9.9
Cycle Q Clear(g_c), s	2.3	0.0	0.0	1.8	0.0	0.0	0.9	0.0	11.3	1.1	0.0	9.9
Prop In Lane	0.65		0.19	0.08		0.63	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	342	0	0	298	0	0	75	0	838	90	0	846
V/C Ratio(X)	0.33	0.00	0.00	0.29	0.00	0.00	0.52	0.00	0.77	0.54	0.00	0.70
Avail Cap(c_a), veh/h	875	0	0	907	0	0	318	0	2386	338	0	2385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	0.0	15.5	0.0	0.0	17.6	0.0	8.2	17.4	0.0	7.7
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.5	0.0	0.0	5.5	0.0	1.5	5.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	0.6	0.0	0.0	0.4	0.0	2.3	0.5	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	0.0	0.0	16.0	0.0	0.0	23.1	0.0	9.8	22.3	0.0	8.7
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		113			87			683			641	
Approach Delay, s/veh		16.2			16.0			10.5			9.8	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	22.2		8.9	6.2	22.6		8.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	50.5		18.5	7.1	50.9		18.5				
Max Q Clear Time (g_c+I1), s	3.1	13.3		4.3	2.9	11.9		3.8				
Green Ext Time (p_c), s	0.0	4.4		0.4	0.0	4.2		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		10.9	
HCM 6th LOS		B	

HCM 6th Signalized Intersection Summary
2: Road 128 & Avenue 419

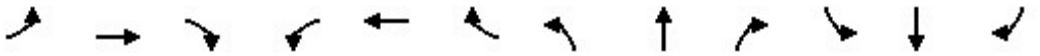
06/27/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	18	98	57	57	41	59	418	131	95	571	103
Future Volume (veh/h)	21	18	98	57	57	41	59	418	131	95	571	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	23	20	107	62	62	45	64	454	142	103	621	112
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	123	47	176	192	109	67	222	1387	420	178	788	135
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	160	313	1178	499	729	446	188	2179	660	129	1238	212
Grp Volume(v), veh/h	150	0	0	169	0	0	337	0	323	836	0	0
Grp Sat Flow(s),veh/h/ln	1651	0	0	1674	0	0	1525	0	1502	1579	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	4.2	8.0	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	3.7	0.0	0.0	3.6	0.0	4.2	16.2	0.0	0.0
Prop In Lane	0.15		0.71	0.37		0.27	0.19		0.44	0.12		0.13
Lane Grp Cap(c), veh/h	346	0	0	367	0	0	1072	0	956	1101	0	0
V/C Ratio(X)	0.43	0.00	0.00	0.46	0.00	0.00	0.31	0.00	0.34	0.76	0.00	0.00
Avail Cap(c_a), veh/h	777	0	0	790	0	0	2253	0	2252	2401	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.7	0.0	0.0	16.8	0.0	0.0	3.4	0.0	3.5	5.5	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.0	0.0	0.2	0.0	0.2	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.4	0.0	0.0	0.5	0.0	0.5	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	0.0	0.0	17.7	0.0	0.0	3.6	0.0	3.7	6.6	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		150			169			660			836	
Approach Delay, s/veh		17.6			17.7			3.7			6.6	
Approach LOS		B			B			A			A	

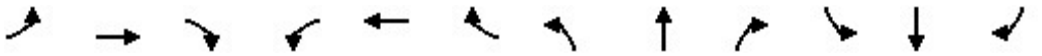
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.3		10.8		31.3		10.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.0		18.0		63.0		18.0				
Max Q Clear Time (g_c+I1), s		6.2		5.4		18.2		5.7				
Green Ext Time (p_c), s		5.1		0.6		8.6		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			7.5									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	176	183	101	312	73	272	604	109	67	623	217
Future Volume (vph)	90	176	183	101	312	73	272	604	109	67	623	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor		0.95		1.00	0.95			0.95			0.95	
Frt		0.94		1.00	0.97			0.98			0.96	
Flt Protected		0.99		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		3258		1752	3405			3242			3211	
Flt Permitted		0.68		0.95	1.00			0.58			0.80	
Satd. Flow (perm)		2223		1752	3405			1902			2569	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	103	202	210	116	359	84	313	694	125	77	716	249
RTOR Reduction (vph)	0	139	0	0	22	0	0	10	0	0	33	0
Lane Group Flow (vph)	0	376	0	116	421	0	0	1122	0	0	1009	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		17.1		6.9	28.5			47.1			47.1	
Effective Green, g (s)		17.1		6.9	28.5			47.1			47.1	
Actuated g/C Ratio		0.19		0.08	0.32			0.53			0.53	
Clearance Time (s)		4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		426		135	1089			1276			1487	
v/s Ratio Prot				c0.07	0.12			c0.18			0.14	
v/s Ratio Perm		c0.17						c0.29			0.22	
v/c Ratio		0.88		0.86	0.39			0.88			0.68	
Uniform Delay, d1		35.0		40.6	23.5			18.5			15.4	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		18.9		38.5	0.2			8.8			2.5	
Delay (s)		53.9		79.1	23.7			27.3			17.9	
Level of Service		D		E	C			C			B	
Approach Delay (s)		53.9			35.2			27.3			17.9	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	89.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



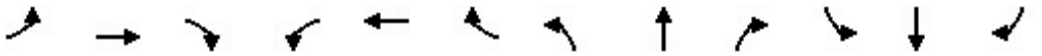
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	11	20	3	11	21	29	436	3	16	576	42
Future Volume (veh/h)	28	11	20	3	11	21	29	436	3	16	576	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1767	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	30	12	22	3	12	23	32	474	3	17	626	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	9	8	8	8	8	8
Cap, veh/h	208	29	48	115	50	89	64	915	6	37	822	60
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.52	0.52	0.02	0.50	0.50
Sat Flow, veh/h	703	332	542	94	565	1011	1682	1768	11	1697	1639	120
Grp Volume(v), veh/h	64	0	0	38	0	0	32	0	477	17	0	672
Grp Sat Flow(s),veh/h/ln	1577	0	0	1670	0	0	1682	0	1779	1697	0	1760
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.7	0.0	6.4	0.4	0.0	11.2
Cycle Q Clear(g_c), s	1.3	0.0	0.0	0.8	0.0	0.0	0.7	0.0	6.4	0.4	0.0	11.2
Prop In Lane	0.47		0.34	0.08		0.61	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	285	0	0	255	0	0	64	0	921	37	0	882
V/C Ratio(X)	0.22	0.00	0.00	0.15	0.00	0.00	0.50	0.00	0.52	0.46	0.00	0.76
Avail Cap(c_a), veh/h	921	0	0	943	0	0	302	0	2596	239	0	2499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	0.0	15.4	0.0	0.0	17.1	0.0	5.8	17.5	0.0	7.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.3	0.0	0.0	5.9	0.0	0.5	8.7	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.3	0.0	0.0	0.3	0.0	1.0	0.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	0.0	0.0	15.7	0.0	0.0	23.0	0.0	6.2	26.3	0.0	8.7
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		64			38			509			689	
Approach Delay, s/veh		16.0			15.7			7.3			9.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	23.3		7.7	5.9	22.7		7.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	52.9		18.5	6.5	51.5		18.5				
Max Q Clear Time (g_c+I1), s	2.4	8.4		3.3	2.7	13.2		2.8				
Green Ext Time (p_c), s	0.0	3.0		0.2	0.0	5.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		8.9	
HCM 6th LOS		A	

HCM 6th Signalized Intersection Summary
2: Road 128 & Avenue 419

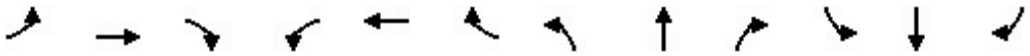
06/27/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	34	96	31	20	16	88	351	47	20	377	52
Future Volume (veh/h)	39	34	96	31	20	16	88	351	47	20	377	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	42	37	104	34	22	17	96	382	51	22	410	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	8	8	8	8	8	8
Cap, veh/h	233	77	169	317	135	72	350	1087	141	168	660	89
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	274	414	905	541	721	383	339	2446	317	31	1485	200
Grp Volume(v), veh/h	183	0	0	73	0	0	277	0	252	489	0	0
Grp Sat Flow(s),veh/h/ln	1592	0	0	1646	0	0	1537	0	1564	1716	0	0
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	0.0	0.8	0.0	0.0	2.5	0.0	2.6	5.3	0.0	0.0
Prop In Lane	0.23		0.57	0.47		0.23	0.35		0.20	0.04		0.12
Lane Grp Cap(c), veh/h	479	0	0	524	0	0	882	0	695	917	0	0
V/C Ratio(X)	0.38	0.00	0.00	0.14	0.00	0.00	0.31	0.00	0.36	0.53	0.00	0.00
Avail Cap(c_a), veh/h	1757	0	0	1714	0	0	3345	0	3622	4050	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.1	0.0	0.0	8.4	0.0	0.0	4.5	0.0	4.5	5.2	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.3	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.3	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	0.0	0.0	8.5	0.0	0.0	4.7	0.0	4.8	5.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		183			73			529			489	
Approach Delay, s/veh		9.6			8.5			4.7			5.7	
Approach LOS		A			A			A			A	

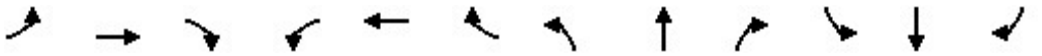
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.3		9.1		15.3		9.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		56.5		24.5		56.5		24.5				
Max Q Clear Time (g_c+I1), s		4.6		4.5		7.3		2.8				
Green Ext Time (p_c), s		3.8		1.0		3.6		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			6.0									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	266	302	93	271	70	315	398	134	77	512	171
Future Volume (vph)	67	266	302	93	271	70	315	398	134	77	512	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor		0.95		1.00	0.95			0.95			0.95	
Frt		0.93		1.00	0.97			0.98			0.97	
Flt Protected		0.99		0.95	1.00			0.98			0.99	
Satd. Flow (prot)		3238		1752	3397			3204			3213	
Flt Permitted		0.79		0.95	1.00			0.58			0.77	
Satd. Flow (perm)		2586		1752	3397			1896			2495	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	77	306	347	107	311	80	362	457	154	89	589	197
RTOR Reduction (vph)	0	176	0	0	25	0	0	17	0	0	30	0
Lane Group Flow (vph)	0	554	0	107	366	0	0	956	0	0	845	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	8%	8%	8%	8%	8%	8%
Turn Type	Perm	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		20.5		6.5	31.5			45.0			45.0	
Effective Green, g (s)		20.5		6.5	31.5			45.0			45.0	
Actuated g/C Ratio		0.23		0.07	0.35			0.50			0.50	
Clearance Time (s)		4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		589		126	1188			1209			1391	
v/s Ratio Prot				c0.06	0.11			c0.16			0.12	
v/s Ratio Perm		c0.21						c0.24			0.18	
v/c Ratio		0.94		0.85	0.31			0.79			0.61	
Uniform Delay, d1		34.2		41.3	21.3			18.6			16.2	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		23.3		38.3	0.1			5.3			2.0	
Delay (s)		57.5		79.5	21.5			23.9			18.1	
Level of Service		E		E	C			C			B	
Approach Delay (s)		57.5			33.9			23.9			18.1	
Approach LOS		E			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	18	20	7	24	54	38	617	8	47	540	34
Future Volume (veh/h)	72	18	20	7	24	54	38	617	8	47	540	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1767	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	78	20	22	8	26	59	41	671	9	51	587	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	9	8	8	8	8	8
Cap, veh/h	267	34	34	109	61	124	77	856	11	92	823	52
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.05	0.49	0.49	0.05	0.50	0.50
Sat Flow, veh/h	1002	293	291	87	526	1064	1682	1754	24	1697	1658	105
Grp Volume(v), veh/h	120	0	0	93	0	0	41	0	680	51	0	624
Grp Sat Flow(s),veh/h/ln	1585	0	0	1677	0	0	1682	0	1777	1697	0	1763
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	0.9	0.0	12.6	1.2	0.0	10.9
Cycle Q Clear(g_c), s	2.6	0.0	0.0	2.0	0.0	0.0	0.9	0.0	12.6	1.2	0.0	10.9
Prop In Lane	0.65		0.18	0.09		0.63	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	335	0	0	294	0	0	77	0	868	92	0	875
V/C Ratio(X)	0.36	0.00	0.00	0.32	0.00	0.00	0.53	0.00	0.78	0.55	0.00	0.71
Avail Cap(c_a), veh/h	832	0	0	862	0	0	293	0	2266	321	0	2275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	16.4	0.0	0.0	18.5	0.0	8.4	18.3	0.0	7.8
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.6	0.0	0.0	5.6	0.0	1.6	5.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.7	0.0	0.0	0.4	0.0	2.7	0.5	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	0.0	17.0	0.0	0.0	24.1	0.0	10.0	23.4	0.0	8.9
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		120			93			721			675	
Approach Delay, s/veh		17.2			17.0			10.8			10.0	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	23.8		9.1	6.3	24.2		9.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	50.5		18.5	6.9	51.1		18.5				
Max Q Clear Time (g_c+I1), s	3.2	14.6		4.6	2.9	12.9		4.0				
Green Ext Time (p_c), s	0.0	4.8		0.5	0.0	4.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			11.3									
HCM 6th LOS			B									

APPENDIX D

Chapter 400 of Caltrans' HDM

CHAPTER 400
INTERSECTIONS AT GRADE

Intersections are planned points of conflict where two or more roadways join or cross. At-grade intersections are among the most complicated elements on the highway system, and control the efficiency, capacity, and safety for motorized and non-motorized users of the facility. The type and operation of an intersection is important to the adjacent property owners, motorists, bicyclists, pedestrians, transit operators, the trucking industry, and the local community.

There are two basic types of at grade intersections: crossing and circular. It is not recommended that intersections have more than four legs. Occasionally, local development and land uses create the need for a more complex intersection design. Such intersections may require a specialized intersection design to handle the specify traffic demands at that location. In addition to the guidance in this manual, see Traffic Operations Policy Directive (TOPD) Number 13-02: Intersection Control Evaluation (ICE) for direction and procedures on the evaluation, comparison and selection of the intersection types and control strategies identified in Index 401.5. Also refer to the Complete Streets Intersection Guide for further information.

Topic 401 - Factors Affecting Design

Index 401.1 - General

At-grade intersections must handle a variety of conflicts among users, which includes truck, transit, pedestrians, and bicycles. These recurring conflicts play a major role in the preparation of design standards and guidelines. Arriving, departing, merging, turning, and crossing paths of moving pedestrians, bicycles, truck, and vehicular traffic have to be accommodated within a relatively small area. The objective of designing an intersection is to effectively balance the convenience, ease, and comfort of the users, as well as the human factors, with moving traffic (automobiles, trucks, motorcycles, transit vehicles, bicycles, pedestrians, etc.).The safety and mobility needs of motorist, bicyclist and pedestrians as well as their movement patterns in intersections must be analyzed early in the planning phase and then followed through appropriately during the design phase of all intersections on the State highway. It is Departmental policy to develop integrated multimodal projects in balance with community goals, plans, and values.

The Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians contains a primer on the factors to consider when designing intersections. It is published by the California Division of Traffic Operations.

401.2 Human Factors

(1) The Driver. An appreciation of driver performance is essential to proper highway design and operation. The suitability of a design rests as much on how safely and efficiently drivers are able to use the highway as on any other criterion.

Motorist's perception and reaction time set the standards for sight distance and length of transitions. The driver's ability to understand and interpret the movements and crossing times of the other vehicle drivers, bicyclists, and pedestrians using the intersection is equally important when making decisions and their associated reactions. The designer needs to keep in mind the user's limitations and therefore design intersections so that they meet user expectation.

(2) The Bicyclist. Bicyclist experience, skills and physical capabilities are factors in intersection design. Intersections are to be designed to help bicyclists understand how to traverse the intersection. Chapter 1000 provides intersection guidance for Class I and Class III bikeways that intersect the State highway system. The guidance in this chapter specifically relates to bicyclists that operate within intersections on the State highway system.

(3) The Pedestrian. Understanding how pedestrians will use an intersection is critical because pedestrian volumes, their age ranges, physical ability, etc. all factor in to their startup time and the time it takes them to cross an intersection and thus, dictates how to design the intersection to avoid potential conflicts with bicyclists and motor vehicles. The guidance in this chapter specifically relates to pedestrian travel within

intersections on the State highway system. See Topic 105, Pedestrian Facilities, Design Information Bulletin 82 - "Pedestrian Accessibility Guidelines for Highway Projects," the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, and the California Manual on Uniform Traffic Control Devices (California MUTCD) for additional guidance.

401.3 Traffic Considerations

Good intersection design clearly indicates to bicyclists and motorists how to traverse the intersection (see Figure 403.6A). Designs that encourage merging traffic to yield to through bicycle and motor vehicle traffic are desirable.

The size, maneuverability, and other characteristics of bicycles and motorized vehicles (automobiles, trucks, transit vehicles, farm equipment, etc.) are all factors that influence the design of an intersection. The differences in operating characteristics between bicycles and motor vehicles should be considered early in design.

Table 401.3 compares vehicle characteristics to intersection design elements.

A design vehicle is a convenient means of representing a particular segment of the vehicle population. See Topic 404 for a further discussion of the uses of design vehicles.

Transit vehicles and how their stops interrelate with an intersection, pedestrian desired walking patterns and potential transfers to other transit facilities are another critical factor to understand when designing an intersection. Transit stops and their placement needs to take into account the required maintenance operations that will be needed and usually supplied by the Transit Operator.

401.4 The Physical Environment

In highly developed urban areas, where right of way is usually limited, the volume of vehicular traffic, pedestrians, and bicyclists may be large, street parking exists, and transit stops (for both buses and light rail) are available. All interact in a variety of movements that contribute to and add to the complexity of a State highway and can result in busy intersections.

Industrial development may require special attention to the movement of large trucks.

Rural areas where farming occurs may require special attention for specialized farm equipment. In addition, rural cities or town centers (rural main streets) also require special attention.

Rural intersections in farm areas with low traffic volumes may have special visibility problems or require shadowing of left-turn vehicles from high speed approach traffic.

Table 401.3

Vehicle Characteristics	Intersection Design Element Affected
Length	Length of storage lane
Width	Lane width
Height	Clearance to overhead signs and signals
Wheel base	Corner radius and width of turning lanes
Acceleration	Tapers and length of acceleration lane
Deceleration	Tapers and length of deceleration lane

There are many factors to be considered in the design of intersections, with the goal to achieve a functional, safe and efficient intersection for all users of the facility. The location and level of use by various modes will have an impact on intersection design, and therefore should be considered early in the design process. In addition to current levels of use, it is important to consider future travel patterns for vehicles, including trucks; pedestrian and bicycle demand and the future expansion of transit.

401.5 Intersection Type

Intersection types are characterized by their basic geometric configuration, and the form of intersection traffic control that is employed:

(1) Geometric Configurations

(a) Crossing-Type Intersections - "Tee" and 4-legged intersections

(b) Circular Intersections –roundabouts, traffic circles, rotaries; however, only roundabouts are acceptable for State highways.

(c) Alternative Intersection Designs – various effective geometric alternatives to traditional designs that can reduce crashes and their severity, improve operations, reduce congestion and delay typically by reducing or altering the number of conflict points; these alternatives include geometric design features such as intersections with displaced left-turns or variations on U-turns.

(2) Intersection Control strategies, See California MUTCD and Traffic Operations Policy Directive (TOPD) Number 13-02, Intersection Control Evaluation for procedures and guidance on how to evaluate, compare and select from among the following intersection control strategies:

(a) Two-Way Stop Controlled - for minor road traffic

(b) All-Way Stop Control

(c) Signal Control

(d) Yield Control (Roundabout)

Historically, crossing-type intersections with signal or "STOP"-control have been used on the State highway system. However, other intersection types, given the appropriate circumstances may enhance intersection performance through fewer or less severe crashes and improve operations by reducing overall delay. Alternative intersection geometric designs should be considered and evaluated early in the project scoping, planning and decision-making stages, as they may be more efficient, economical and safer solutions than traditional designs. Alternative intersection designs can effectively balance the safety and mobility needs of the motor vehicle drivers, transit riders, bicyclists and pedestrians using the intersection.

401.6 Transit

Transit use may range from periodic buses, handled as part of the normal mix of vehicular traffic, to Bus Rapid Transit (BRT) or light rail facilities which can have a large impact on other users of the intersection. Consideration of these modes should be part of the early planning and design of intersections.

Topic 402 - Operational Features Affecting Design

402.1 Capacity

Adequate capacity to handle peak period traffic demands is a basic goal of intersection design.

(1) Unsignalized Intersections. The "Highway Capacity Manual", provides methodology for capacity analysis of unsignalized intersections controlled by "STOP" or "YIELD" signs. The assumption is made that major street traffic is not affected by the minor street movement. Unsignalized intersections generally become candidates for signalization when traffic backups begin to develop on the cross street or when gaps in traffic are insufficient for drivers to yield to crossing pedestrians. See the California MUTCD, for signal warrants. Changes to intersection controls must be coordinated with District Traffic Branch.

(2) Signalized Intersections. See Topic 406 for analysis of simple signalized intersections, including ramps. The analysis of complex and alternative intersections should be referred to the District Traffic Branch; also see Traffic Operations Policy Directive (TOPD) Number 13-02.

(3) Roundabout Intersections. See TOPD Number 13-02 for screening process and the Intersection Control Evaluation(ICE) Process Informational Guide for operational analysis methods and tools.

402.2 Collisions

(1) General. Intersections have a higher potential for conflict compared to other sections of the highway because travel is interrupted, traffic streams cross, and many types of turning movements occur.

The type of traffic control affects the type of collisions. Signalized intersections tend to have more rear end and same-direction

sideswipes than intersections with "STOP"-control on minor legs. Roundabouts experience few angle or crossing collisions. Roundabouts reduce the frequency and severity of collisions, especially when compared to the performance of signalized intersections in high speed environments. Other alternative intersection types are configurations to consider for minimizing the number of conflict points.

(2) Undesirable Geometric Features.

- Inadequate approach sight distance.
- Inadequate corner sight distance.
- Steep grades.
- Five or more approaches.
- Presence of curves within intersections(unless at roundabouts).
- Inappropriately large curb radii.
- Long pedestrian crossing distances.
- Intersection Angle <75 degrees (see Topic 403).

402.3 On-Street Parking

On-street parking generally decreases through-traffic capacity, impedes traffic flow, and increases crash potential. Where the primary service of the arterial is the movement of vehicles, it may be desirable to prohibit on-street parking on State highways in urban and suburban expressways and rural arterial sections. However, within urban and suburban areas and in rural communities located on State highways, on-street parking should be considered in order to accommodate existing land uses. Where adequate off-street parking facilities are not available, the designer should consider on-street parking, so that the proposed highway improvement will be compatible with the land use. On-street parking as well as off-street parking needs to comply with DIB82. See AASHTO, A Policy on Geometric Design of Highways and Streets for additional guidance related to on-street parking.

402.4 Consider All Users

Intersections should accommodate all users of the facility, including vehicles, bicyclists, pedestrians and transit. Bicycles have all the rights and responsibilities as motorist per the California Vehicle Code, but should have separate consideration of their needs, even separate facilities if volumes warrant. Pedestrians should not be prohibited from crossing one or more legs of an intersection, unless no other safe alternative exists. Pedestrians can be prohibited from crossing one or more legs of an intersection if a reasonable alternate route exists and there is a demonstrated need to do so. All pedestrian facilities shall be ADA compliant as outlined in DIB 82. Transit needs should be determined early in the planning and design phase as their needs can have a large impact on the performance of an intersection. Transit stops in the vicinity of intersections should be evaluated for their effect on the safety and operation of the intersection(s) under study. See Topic 108 for additional information.

402.5 Speed-Change Areas

Speed-change areas for vehicles entering or leaving main streams of traffic are beneficial to the safety and efficiency of an intersection. Entering traffic merges most efficiently with through traffic when the merging angle is less than 15 degrees and when speed differentials are at a minimum.

Topic 403 - Principles of Channelization

403.1 Preference to Major Movements

The provision of direct free-flowing high-standard alignment to give preference to major movements is good channelization practice. This may require some degree of control of the minor movements such as stopping, funneling, or even eliminating them. These controlling measures should conform to natural paths of movement and should be introduced gradually to promote smooth and efficient operation.

403.2 Areas of Conflict

Large multilane undivided intersection areas are undesirable. The hazards of conflicting movements are magnified when motorists, bicyclists, and pedestrians are unable to anticipate movements of other users within these areas. Channelization reduces areas of conflict by separating or regulating traffic movements into definite paths of travel by the use of pavement markings or traffic islands.

Multilane undivided intersections, even with signalization, are more difficult for pedestrians to cross. Providing pedestrian refuge islands enable pedestrians to cross fewer lanes at a time.

See Index 403.7 for traffic island guidance when used as pedestrian refuge. Curb extensions shorten crossing distance and increase visibility. See Index 303.4 for curb extensions.

403.3 Angle of Intersection

A right angle (90°) intersection provides the most favorable conditions for intersecting and turning traffic movements. Specifically, a right angle provides:

- The shortest crossing distance for motor vehicles, bicycles, and pedestrians.
- Sight lines which optimize corner sight distance and the ability of motorists to judge the relative position and speed of approach traffic.
- Intersection geometry that can reduce vehicle turning speeds so collisions are more easily avoided and the severity of collisions are minimized.
- Intersection geometry that sends a message to turning bicyclists and motorists that they are making a turning movement and should yield as appropriate to through traffic on the roadway they are leaving, to traffic on the receiving roadway, and to pedestrians crossing the intersection.

Minor deviations from right angles are generally acceptable provided that the potentially detrimental impact on visibility and turning movements for large trucks (see Topic 404) can be mitigated. However, large deviations from right angles may decrease visibility, hamper certain turning operations, and will increase the size of the intersection and therefore crossing distances for bicyclists and pedestrians, may encourage high speed turns, and may reduce yielding by turning traffic. When a right angle cannot be provided due to physical constraints, the interior angle should be designed as close to 90 degrees as is practical, but should not be less than 75 degrees. Mitigation should be considered for the affected intersection design features. (See Figure 403.3A). A 75 degree angle does not unreasonably increase the crossing distance or generally decrease visibility. Class II bikeway crossings at railroads follow similar guidance to Class I bikeway crossings at railroads, see Index 1003.5(3), and Figure 403.3B.

A characteristic of skewed intersection angles is that they result in larger intersections.

When existing intersection angles are less than 75 degrees, the following retrofit improvement strategies should be considered:

- Realign the subordinate intersection legs if the new alignment and intersection location(s) can be designed without introducing new geometric or operational deficiencies.
- Provide acceleration lanes for difficult turning movements due to radius or limited visibility.
- Restrict problematic turning movements; e.g. for minor road left turns with potentially limited visibility.
- Provide refuge areas for pedestrians at very long crossings.

For additional guidance on the above and other improvement strategies, consult with the District Design Liaison.

Particular attention should be given to skewed angles on curved alignment with regards to sight distance and visibility. Crossroads skewed to the left have more restricted visibility for drivers of vans and trucks than crossroads skewed to the right. In addition, severely skewed intersection angles, coupled with steep downgrades (generally over 4 percent) can increase the potential for high centered vehicles to overturn where the vehicle is on a downgrade and must make a turn greater than 90 degrees onto a crossroad. These factors should be considered in the design of skewed intersections.

403.4 Points of Conflict

Channelization separates and clearly defines points of conflict within the intersection. Bicyclists, pedestrians and motorists should be exposed to only one conflict or confronted with one decision at a time.

Speed-change areas for diverging traffic should provide adequate length clear of the through lanes to permit vehicles to decelerate after leaving the through lanes.

See AASHTO, A Policy on Geometric Design of Highways and Streets for additional guidance on speed-change lanes.

Figure 403.3A
Angle of Intersection
(Minor Leg Skewed to the Right)

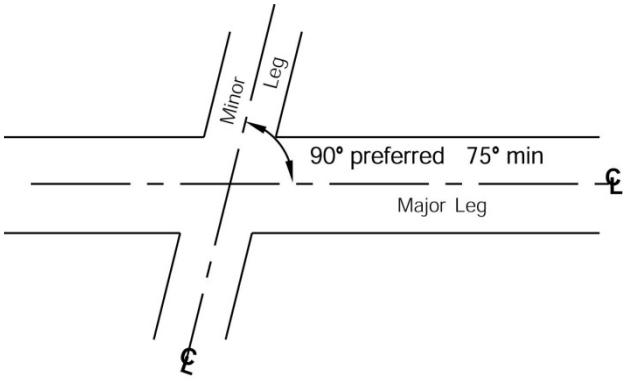
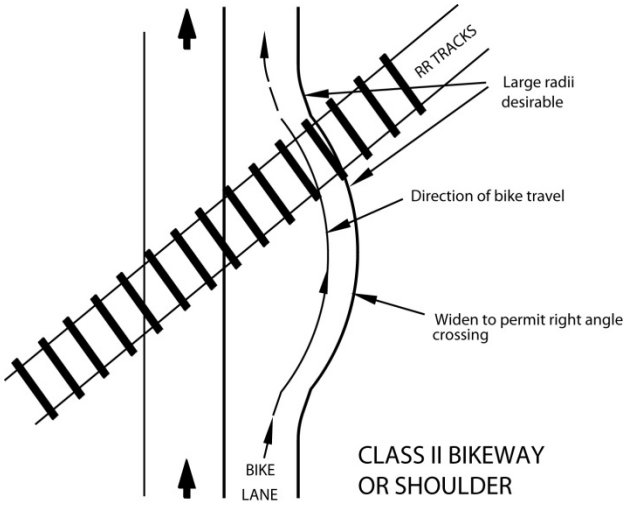


Figure 403.3.B
Class II Bikeway
Crossing Railroad



403.5 (Currently Not In Use)

403.6 Turning Traffic

A separate turning lane removes turning movements from the intersection area. Abrupt changes in alignment or sight distance should be avoided, particularly where traffic turns into a separate turning lane from a high-standard through facility.

For wide medians, consider the use of offset left-turn lanes at both signalized and unsignalized intersections. Opposing left-turn lanes are offset or shifted as far to the left as practical by reducing the width of separation immediately before the intersection. Rather than aligning the left-turn lane exactly parallel with and adjacent to the through lane, the offset left-turn lane is separated from the adjacent through lane. Offset left-turn lanes provide improved visibility of opposing through traffic. For further guidance on offset left-turn lanes, see AASHTO, A Policy on Geometric Design of Highways and Streets.

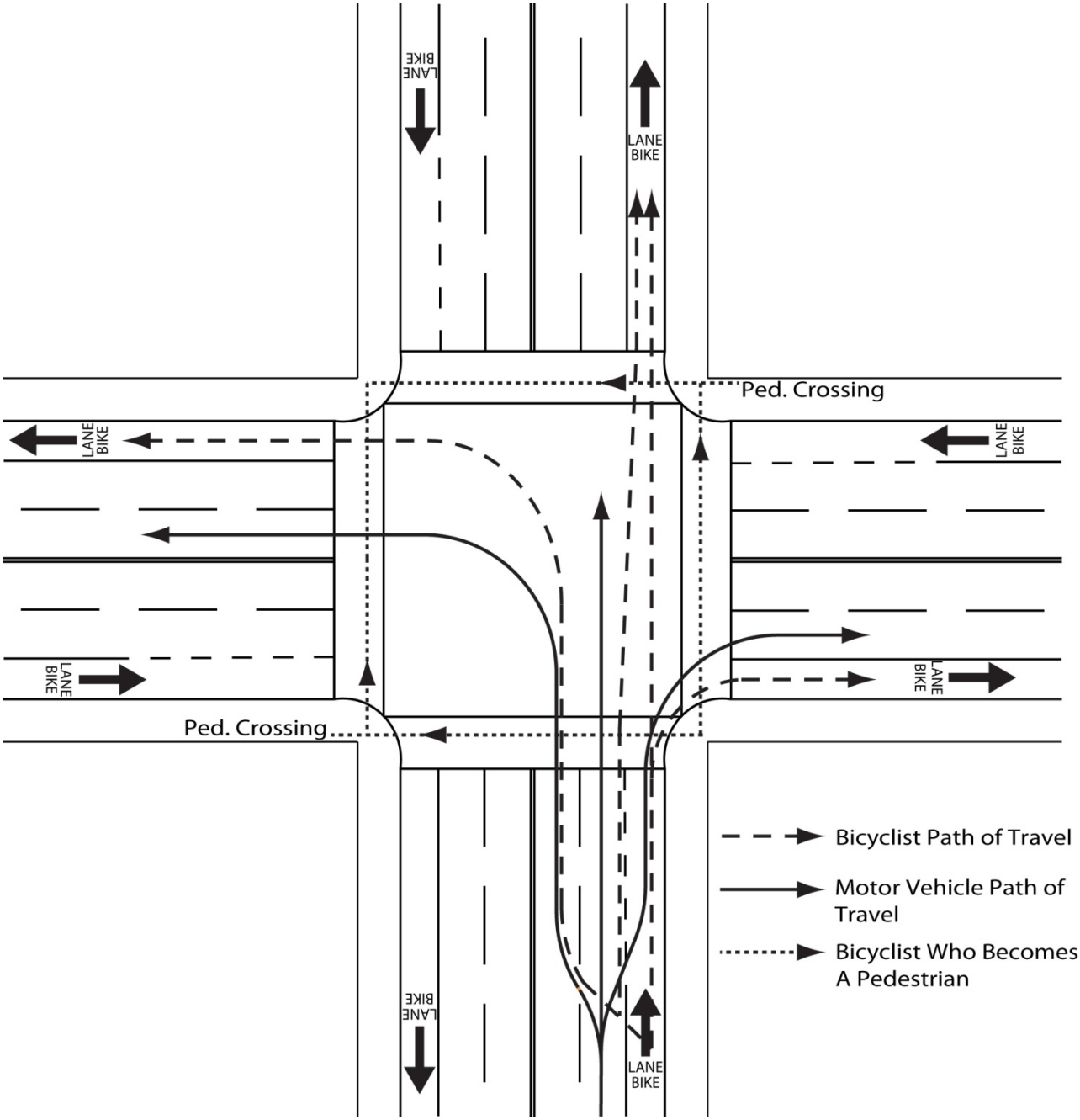
(1) Treatment of Intersections with Right-Turn-Only Lanes. Most motor vehicle/bicycle collisions occur at intersections. For this reason, intersection design should be accomplished in a manner that will minimize confusion by motorists and bicyclists, eliminate ambiguity and induce all road users to operate in accordance with the statutory rules of the road in the California Vehicle Code. Right-turn-only lanes should be designed to meet user expectations and reduce conflicts between vehicles and bicyclists.

Figure 403.6A illustrates a typical at-grade intersection of multilane streets without right-turn-only lanes. Bike lanes or shoulders are included on all approaches. Some common movements of motor vehicles and bicycles are shown. A prevalent crash type is between straight-through bicyclists and right-turning motorists, who do not yield to through bicyclists.

Optional right-turn lanes should not be used in combination with right-turn-only lanes on roads where bicycle travel is permitted. The use of optional right-turn lanes in combination with right-turn-only lanes is not recommended in any case where a Class II bike lane is present. This may increase the need for dual or triple right-turn-only lanes, which have

Figure 403.6A

Typical Bicycle and Motor Vehicle Movements at Intersections of Multilane Streets without Right-Turn-Only Lanes

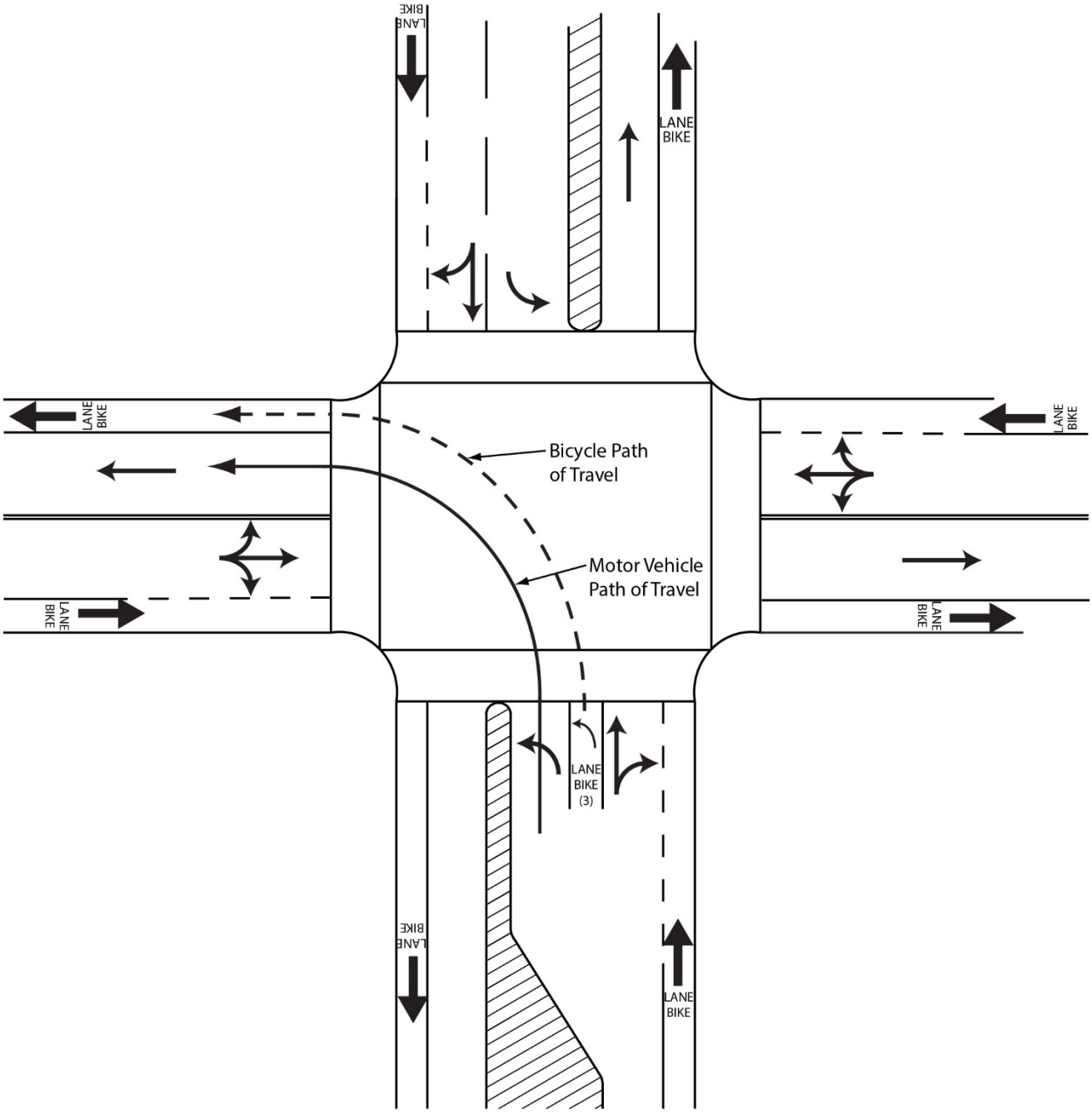


NOTE:

Only one direction is shown for clarity.

Figure 403.6B

Bicycle Left-Turn-Only Lane



NOTES:

(1) For bicycle lane markings, see the California MUTCD.

(2) Bicycle detectors are necessary for signalized intersections.

(3) Left-turn bicycle lane should have receiving bike lane or shoulder.

challenges with visibility between turning vehicles and pedestrians. Multiple right-turn-only lanes should not be free right-turns when there is a pedestrian crossing. If there is a pedestrian crossing on the receiving leg of multiple right-turn-only lanes, the intersection should be controlled by a pedestrian signal head, or geometrically designed such that pedestrians cross only one turning lane at a time.

Locations with right-turn-only lanes should provide a minimum 4-foot width for bicycle use between the right-turn and through lane when bikes are permitted, except where posted speed is greater than 40 miles per hour, the minimum width should be 6 feet. Configurations that create a weaving area without defined lanes should not be used.

For signing and delineation of bicycle lanes at intersections, consult District Traffic Operations.

Figure 403.6B depicts an intersection with a left-turn-only bicycle lane, which should be considered when bicycle left-turns are common. A left-turn-only bicycle lane may be considered at any intersection and should always be considered as a tool to provide mobility for bicyclists. Signing and delineation options for bicycle left-turn-only lanes are shown in the California MUTCD.

(2) Design of Intersections at Interchanges. The design of at-grade intersections at interchanges should be accomplished in a manner that will minimize confusion of motorists, bicyclists, and pedestrians. Higher speed, uncontrolled entries and exits from freeway ramps should not be used at the intersection of the ramps with the local road. The smallest curb return radius should be used that accommodates the design vehicle. Intersections with interior angles close to 90 degrees reduce speeds at conflict points between motorists, bicyclists, and pedestrians. The intersection skew guidance in Index 403.3 applies to all ramp termini at the local road.

403.7 Refuge Areas

Traffic islands should be used to provide refuge areas for bicyclists and pedestrians. See Index 405.4 for further guidance.

403.8 Prohibited Turns

Traffic islands may be used to direct bicycle and motorized vehicle traffic streams in desired directions and prevent undesirable movements. Care should be taken so that islands used for this purpose accommodate convenient and safe pedestrian and bicycle crossings, drainage, and striping options. See Topic 303.

403.9 Effective Signal Control

At intersections with complex turning movements, channelization is required for effective signal control. Channelization permits the sorting of approaching bicycles and motorized vehicles which may move through the intersection during separate signal phases. Pedestrians may also have their own signal phase. This requirement is of particular importance when traffic-actuated signal controls are employed.

The California MUTCD has warrants for the placement of signals to control vehicular, bicycle and pedestrian traffic. Pedestrian activated devices, signals or beacons are not required, but must be evaluated where directional, multilane, pedestrian crossings occur. These locations may include:

- Mid-block street crossings;
- Channelized turn lanes;
- Ramp entries and exits; and
- Roundabouts.

The evaluation, selection, programming and use of a chosen device should be done with guidance from District Traffic Operations.

403.10 Installation of Traffic Control Devices

Channelization may provide locations for the installation of essential traffic control devices, such as “STOP” and directional signs. See Index 405.4 for information about the design of traffic islands.

403.11 Summary

- Give preference to the major move(s).

- Reduce areas of conflict.
- Reduce the duration of conflicts.
- Cross traffic at right angles or skew no more than 75 degrees. (90 degrees preferred.)
- Separate points of conflict.
- Provide speed-change areas and separate turning lanes where appropriate.
- Provide adequate width to shadow turning traffic.
- Restrict undesirable moves with traffic islands.
- Coordinate channelization with effective signal control.
- Install signs in traffic islands when necessary but avoid building conflicts one or more modes of travel.
- Consider all users.

403.12 Other Considerations

- An advantage of curbed islands is they can serve as pedestrian refuge. Where curbing is appropriate, consideration should be given to mountable curbs. See Topic 303 for more guidance.
- Avoid complex intersections that present multiple choices of movement to the motorist and bicyclist.
- Traffic safety should be considered. Collision records provide a valuable guide to the type of channelization needed.

Topic 404 - Design Vehicles

404.1 General

Any vehicle, whether car, bus, truck, or recreational vehicle, while turning a curve, covers a wider path than the width of the vehicle. The outer front tire can generally follow a circular curve, but the inner rear tire will swing in toward the center of the curve.

Some terminology is vital to understanding the engineering concepts related to design vehicles. See Index 62.4 Interchanges and Intersection at Grade for terminology.

404.2 Design Considerations

It may not be necessary to provide for design vehicle turning movements at all intersections along the State route if the design vehicle's route is restricted or it is not expected to use the cross street frequently. Discuss with Traffic Operations and the local agency before a turning movement is not provided. The goal is to minimize possible conflicts between vehicles, bicycles, pedestrians, and other users of the roadway, while providing the minimum curb radii appropriate for the given situation.

Both the tracking width and swept width should be considered in the design of roadways for use of the roadway by design vehicles.

Tracking width lines delineate the path of the vehicle tires as the vehicle moves through the turn.

Swept width lines delineate the path of the vehicle body as the vehicle moves through the turn and will therefore always exceed the tracking width. The following list of criteria is to be used to determine whether the roadway can accommodate the design vehicle.

(1) Traveled way.

(a) To accommodate turn movements(e.g., at intersections, driveways, alleys, etc.),the travel way width and intersection design should be such that tracking width and swept width lines for the design vehicle do not cross into any portion of the lane for opposing traffic. Encroachment into the shoulder and bike lane is permitted.

(b) Along the portion of roadway where there are no turning options, vehicles are required to stay within the lane lines. **The tracking and swept widths lines for the design vehicle shall stay within the lane as defined in Index 301.1 and Table 504.3.** This includes no encroachment into Class II bike lanes.

(2) Shoulders. Both tracking width and swept width lines may encroach onto paved shoulders to accommodate turning. For design projects where the tracking width lines are shown to encroach onto paved shoulders, the shoulder pavement structure should be engineered to sustain the weight of the design vehicle. See Index 613 for general traffic loading

considerations and Index 626 for tied rigid shoulder guidance. At corners where no sidewalks are provided and pedestrians are using the shoulder, a paved refuge area may be provided outside the swept width of turning vehicle.

(3) Curbs and Gutters. Tires may not mount curbs. If curb and gutter are present and any portion of the gutter pan is likewise encroached, the gutter pan must be engineered to match the adjacent shoulder pavement structure. See Index 613.5(2)(c) for gutter pan design guidance.

(4) Edge of Pavement. To accommodate a turn, the swept width lines may cross the edge of pavement provided there are no obstructions. The tracking width lines must remain on the pavement structure, including the shoulder, provided that the shoulder is designed to support vehicular traffic. If truck volumes are high, consideration of a wider shoulder is encouraged in order to preserve the pavement edge.

(5) Bicycle Lanes. Where bicycle lanes are considered, the design guidance noted above applies. Vehicles are permitted to cross a bicycle lane to initiate or complete a turning movement or for emergency parking on the shoulder. See the California MUTCD for Class II bike lane markings.

To accommodate turn movements (e.g., intersections, driveways, alleys, etc. are present), both tracking width and swept width lines may cross the broken white painted bicycle lane striping in advance of the right-turn, entering the bicycle lane when clear to do so.

(6) Sidewalks. Tracking width and swept width lines must not encroach onto sidewalks or pedestrian refuge areas, without exception.

(7) Obstacles. Swept width lines may not encroach upon obstacles including, but not limited to, curbs, islands, sign structures, traffic delineators/channelizers, traffic signals, lighting poles, guardrails, trees, cut slopes, and rock outcrops.

(8) Appurtenances. Swept width lines do not include side mirrors or other appurtenances allowed by the California Vehicle Code, thus, accommodation to non-motorized users of the facility and appurtenances should be considered.

If both the tracking width and swept width lines meet the design guidance listed above, then the geometry is adequate for that design vehicle. Consideration should be given to pedestrian crossing distance, motor vehicle speeds, truck volumes, alignment, bicycle lane width, sight distance, and the presence of on-street parking.

Note that the STAA Design Vehicle has a template with a 56-foot (minimum) and a 67-foot (longer) radius and the California Legal Design Vehicle has a template with 50-foot (minimum) and 60-foot (longer) radii. These templates are shown in Figures 404.5A through 404.5D. The longer radius templates are more conservative. The longer radius templates develop less swept width and leave a margin of error for the truck driver. The longer radius templates should be used for conditions where the vehicle may not be required to stop before entering the intersection.

The minimum radius template can be used if the longer radius template does not clear all obstacles. The minimum radius templates demonstrate the tightest turn that the vehicles can navigate, assuming a speed of less than 10 miles per hour.

For offtracking lane width requirements on freeway ramps, see Topic 504.

404.3 Design Tools

District Truck Managers should be consulted early in the project to ensure compliance with the design vehicle guidance contained in Topic 404. Consult local agencies to verify the location of local truck routes. Essentially, two options are available – templates or computer software.

- The turning templates in Figures 404.5A through G are a design aid for determining the swept width and/or tracking width of large vehicles as they maneuver through a turn. The templates can be used as overlays to evaluate the adequacy of the geometric layout of a curve or intersection when reproduced on clear film and scaled to match the highway drawings. These templates assume a vehicle speed of less than 10 miles per hour.

- Computer software such as AutoTURN or AutoTrak can draw the swept width and/or tracking width along any design curve within a CADD drawing program such as MicroStation or AutoCAD. Dimensions taken from the vehicle diagrams in Figures 404.5A through G may be inputted into the computer program by creating a custom vehicle if the vehicle is not already included in the software library. The software can also create a vehicle turn template that conforms to any degree curve desired.

404.4 Design Vehicles and Related Definitions

(1) The Surface Transportation Assistance Act of 1982 (STAA).

(a) STAA Routes. STAA allows certain longer trucks called STAA trucks to operate on the National Network. After STAA was enacted, the Department evaluated State routes for STAA truck access and created Terminal Access and Service Access routes which, together with the National Network, are called the STAA Network. Terminal Access routes allow STAA access to terminals and facilities. Service Access routes allow STAA trucks one-mile access off the National Network, but only at identified exits and only for designated services. Service Access routes are primarily local roads. A "Truck Route Map," indicating the National Network routes and the Terminal Access routes is posted on the Department's Office of Commercial Vehicle Operations website and is also available in printed form.

(b) STAA Design Vehicle. The STAA design vehicle is a truck tractor-semitrailer combination with a 48-foot semitrailer, a 43-foot kingpin-to-rear-axle (KPRA) distance, an 8.5-foot body and axle width, and a 23-foot truck tractor wheelbase. Note, a truck tractor is a non-load-carrying vehicle. There is also a STAA double (truck tractor-semitrailer-trailer); however, the double is not used as the design vehicle due to its shorter turning radius. The STAA Design Vehicle is shown in Figures 404.5A and B.

<u>The STAA Design Vehicle in Figures 404.5A or B should be used on the National Network, Terminal Access, California Legal, and Advisory routes.</u>

(c) STAA Vehicle – 53-Foot Trailer. Another category of vehicle allowed only on STAA routes has a maximum 53-foot trailer, a maximum 40-foot KPRA for two or more axles, a maximum 38-foot KPRA for a single axle, and unlimited overall length. This vehicle is not to be used as the design vehicle as it is not the worst case for offtracking due to its shorter KPRA. The STAA Design Vehicle should be used instead.

(2) California Legal.

(a) California Legal Routes. Virtually all State routes off the STAA Network are California Legal routes. There are two types of California Legal routes, the regular California Legal routes and the KPRA Advisory Routes. Advisory routes have signs posted that state the maximum KPRA length that the route can accommodate without the vehicle offtracking outside the lane. KPRA advisories range from 30 feet to 38 feet, in 2-foot increments. California Legal vehicles are allowed to use both types of California Legal routes. California Legal vehicles can also use the STAA Network. However, STAA trucks are not allowed on any California Legal routes. The Truck Route Map indicating the California Legal routes is posted on the Department's Office of Commercial Vehicle Operations website.

(b) California Legal Design Vehicle. The California Legal vehicle is a truck tractor-semitrailer with the following dimensions: the maximum overall length is 65 feet; the maximum KPRA distance is 40 feet for semitrailers with two or more axles, and 38 feet for semitrailers with a single axle; the maximum width is 8.5 feet. There are also two categories of California Legal doubles (truck tractor-semitrailer-trailer); however, the doubles are not used as the design vehicle due to their shorter turning radii. The California Legal Design Vehicle is shown in Figures 404.5C and D.

The California Legal Design Vehicle in Figures 404.5C and D should only be used when the STAA design vehicle is not feasible and with concurrence from the District Truck Manager.

(3) 40-Foot Bus.

(a) 40-Foot Bus Routes. All single-unit vehicles, including buses and motor trucks up to 40 feet in length, are allowed on virtually every route in California.

(b) 40-Foot Bus Design Vehicle. The 40-Foot Bus Design Vehicle shown in Figure 404.5E is an AASHTO standard. Its 25-foot wheelbase and 40-foot length are typical of city transit buses and some intercity buses. At intersections where truck volumes are light or where the predominate truck traffic consists of mostly 3-axle units, the 40-foot bus may be used. Its wheel path sweeps a greater width than 3-axle delivery trucks, as well as smaller buses such as school buses.

(4) 45-Foot Bus & Motorhome.

(a) 45-Foot Bus & Motorhome Routes. The "45-foot bus and motorhome" refers to bus and motorhomes over 40 feet in length, up to and including 45 feet in length. These longer buses and motorhomes are allowed in California, but only on certain routes.

The 45-foot tour bus became legal on the National Network in 1991 and later allowed on some State routes in 1995. The 45-foot motorhome became legal in California in 2001, but only on those routes where the 45-foot bus was already allowed. A Bus and Motorhome Map indicating where these longer buses and motorhomes are allowed and where they are not allowed is posted on the Department's Office of Commercial Vehicle Operations website.

(b) 45-Foot Bus and Motorhome Design Vehicle. The 45-Foot Bus & Motorhome Design Vehicle shown in Figure 404.5F is used by Caltrans for the longest allowable bus and motorhome. Its wheelbase is 28.5 feet. It is also similar to the AASHTO standard 45-foot bus. Typically this should be the smallest design vehicle used on a State highway. It may be used where the State highway intersects local streets without commercial or industrial traffic.

The 45-Foot Bus and Motorhome Design Vehicle shown in Figure 404.5F should be used in the design of all interchanges and intersections on all green routes indicated on the Bus and Motorhome Map for both new construction and rehabilitation projects. Check also the longer standard design vehicles on these routes as required – the STAA Design Vehicle and the California Legal Design Vehicle in Indexes 404.4(1) and (2).

(5) 60-Foot Articulated Bus.

(a) 60-Foot Articulated Bus Routes. The articulated bus is allowed a length of up to 60 feet per CVC 35400(b)(3)(A). This bus is used primarily by local transit agencies for public transportation. There is no master listing of such routes. Local transit agencies should be contacted to determine possible routes within the proposed project.

(b) 60-Foot Articulated Bus Design Vehicle. The 60-Foot Articulated Bus Design Vehicle shown in Figure 404.5G is an AASHTO standard. The routes served by these buses should be designed to accommodate the 60-Foot Articulated Bus Design Vehicle.

404.5 Turning Templates & Vehicle Diagrams

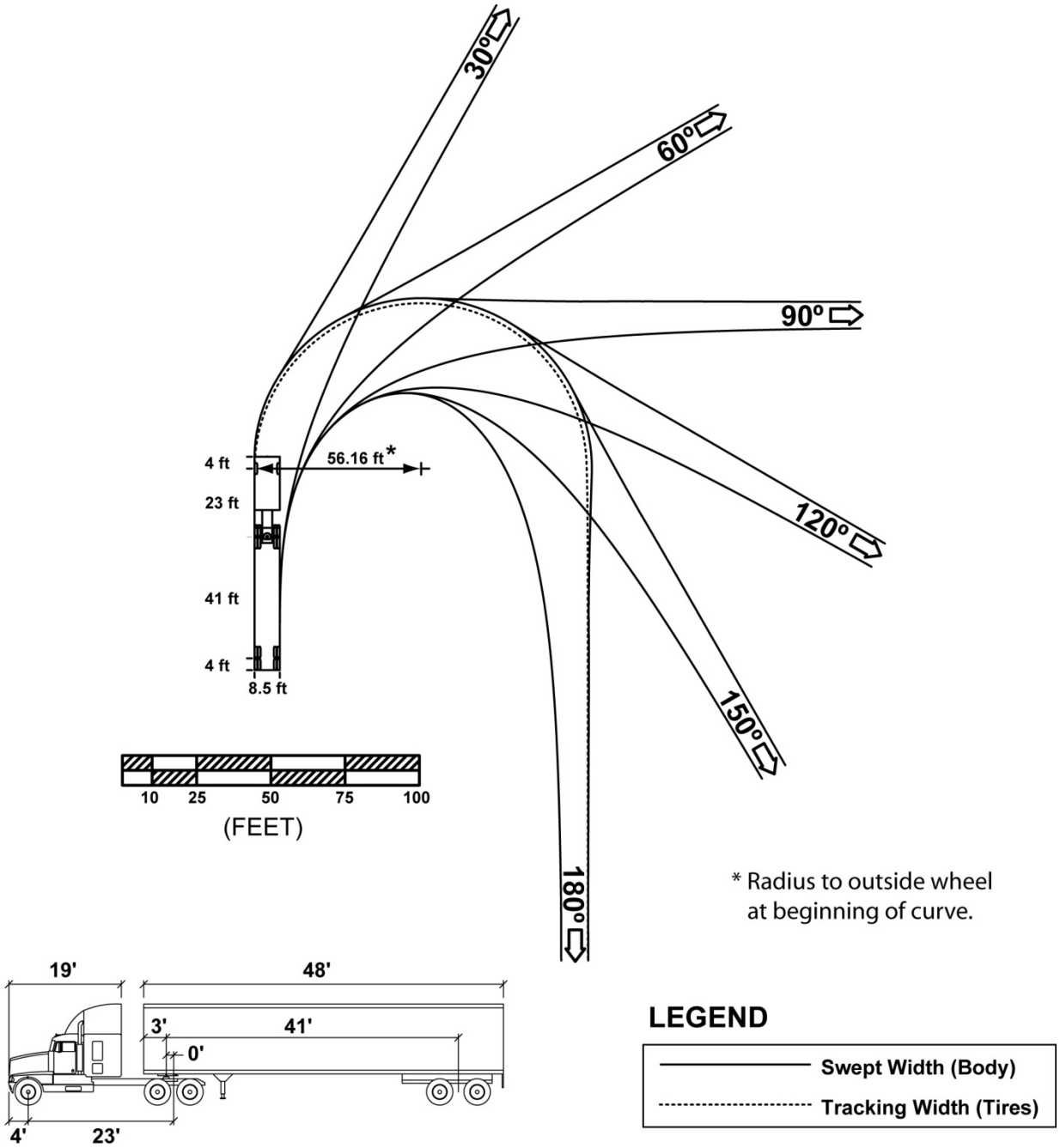
Figures 404.5A through G are computer-generated turning templates at an approximate scale of 1"=50' and their associated vehicle diagrams for the design vehicles described in Index 404.3. The radius of the template is measured to the outside front wheel path at the beginning of the curve. Figures 404.5A through G contain the terms defined as follows:

(1) Tractor Width - Width of tractor body.

(2) Trailer Width - Width of semitrailer body.

(3) Tractor Track - Tractor axle width, measured from outside face of tires.

Figure 404.5A
STAA Design Vehicle
56-Foot Radius



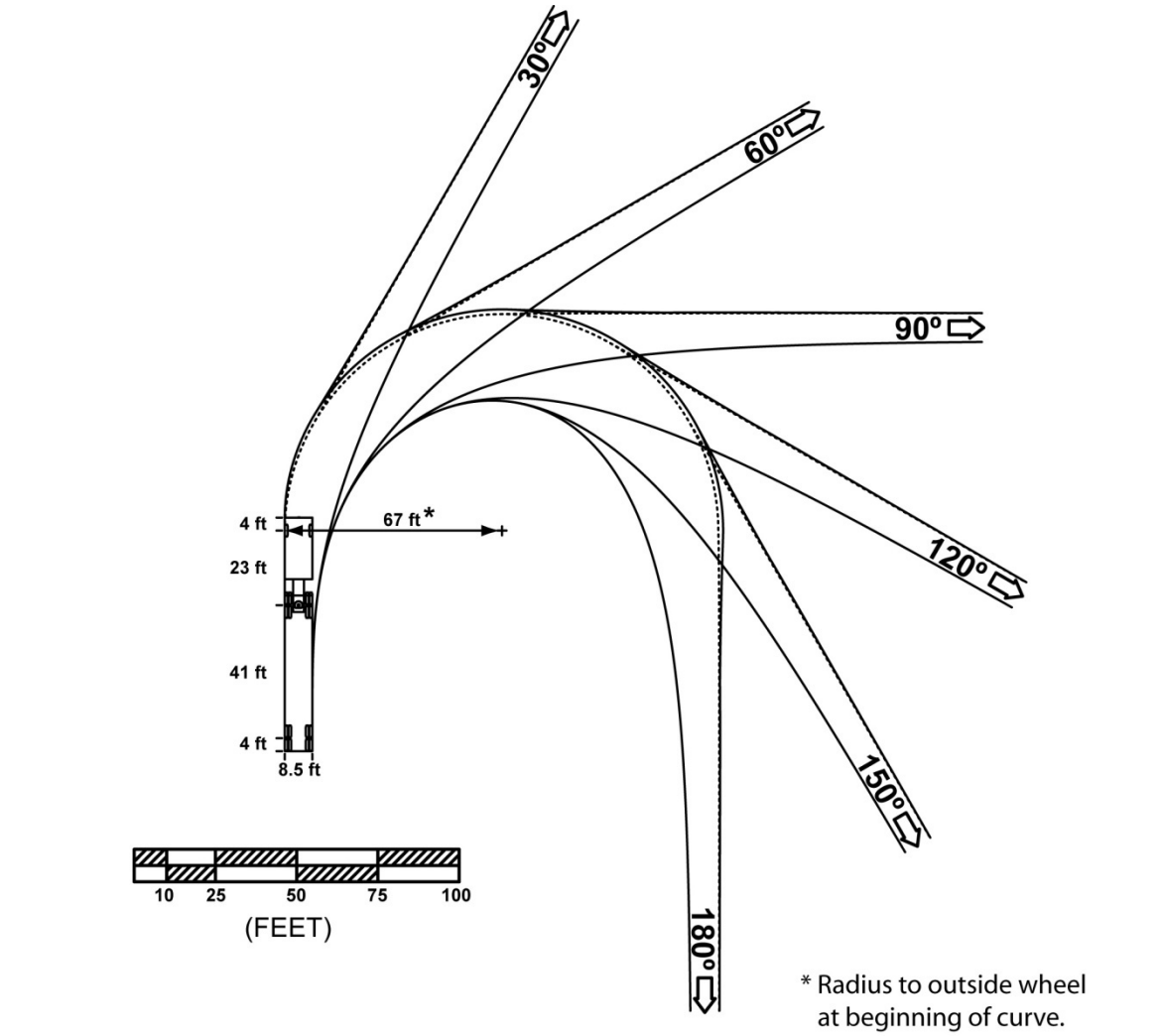
STAA - STANDARD

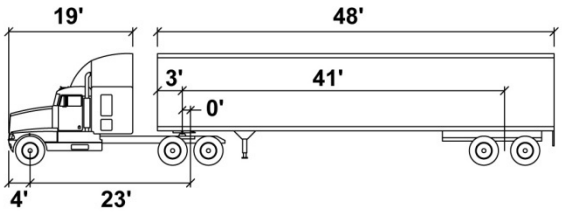
Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5B

STAA Design Vehicle
67-Foot Radius





LEGEND

Swept Width (Body)

Tracking Width (Tires)

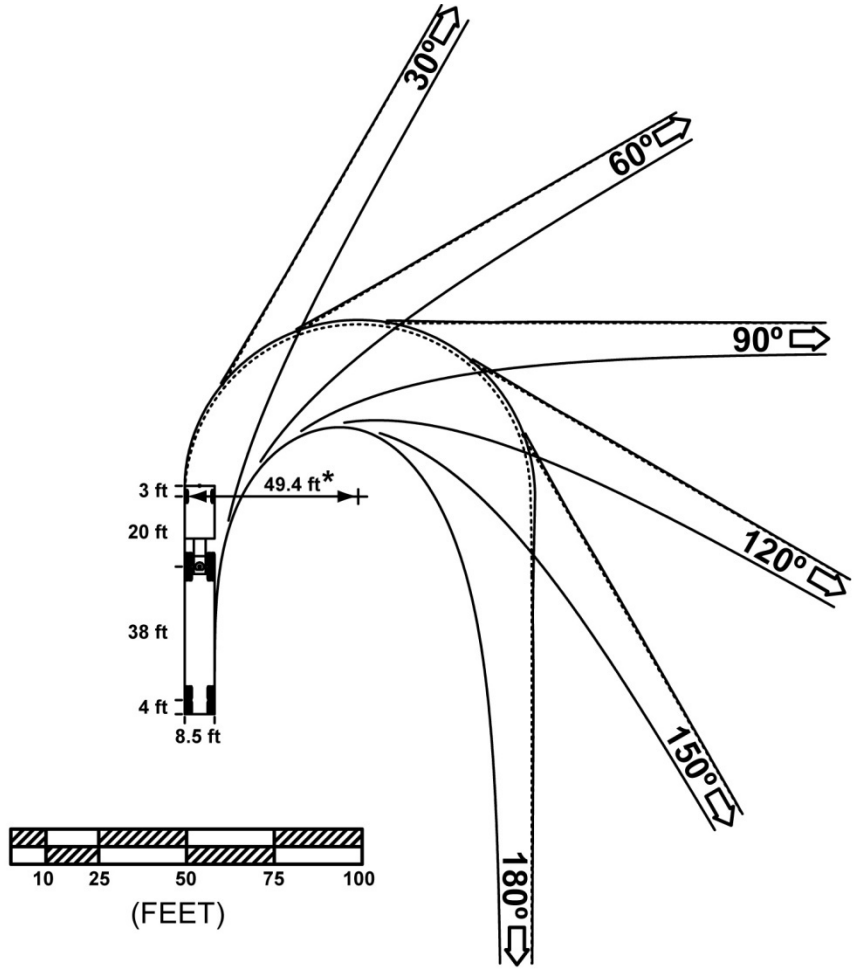
STAA - STANDARD

Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

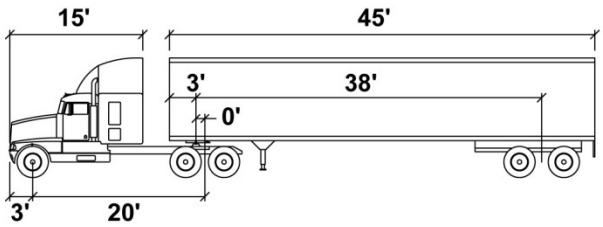
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5C

California Legal Design Vehicle
50-Foot Radius



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

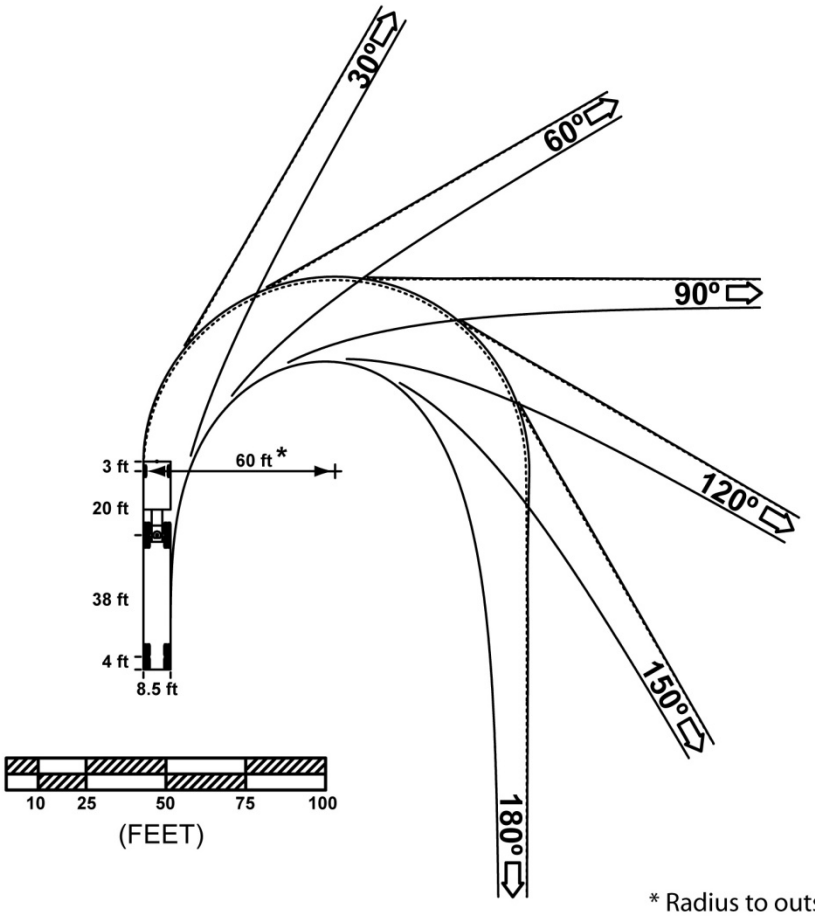
CA LEGAL - 65 FT

Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

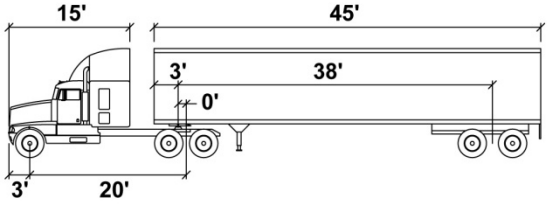
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5D

California Legal Design Vehicle
60-Foot Radius



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

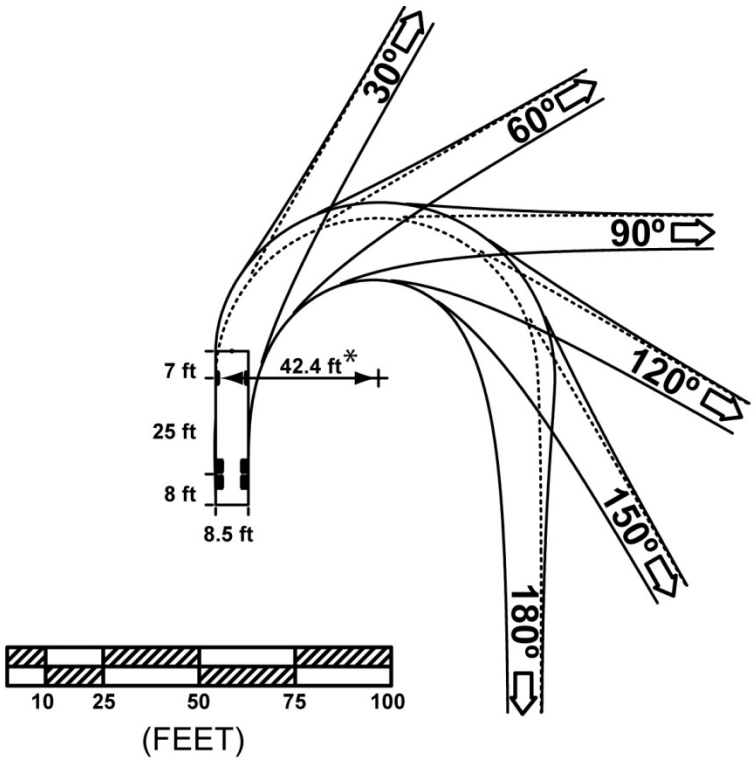
CA LEGAL - 65 FT

Tractor Width	: 8.5'	Lock to Lock Time	: 6 seconds
Trailer Width	: 8.5'	Steering Lock Angle	: 26.3 degrees
Tractor Track	: 8.5'	Articulating Angle	: 70 degrees
Trailer Track	: 8.5'		

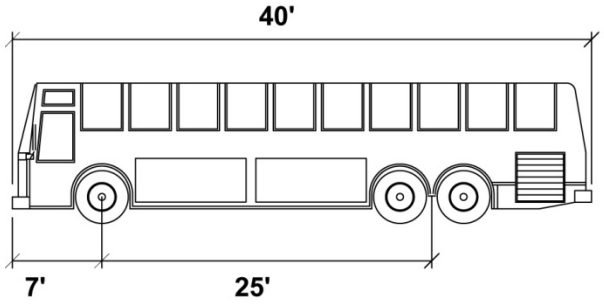
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5E

40-Foot Bus Design Vehicle



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

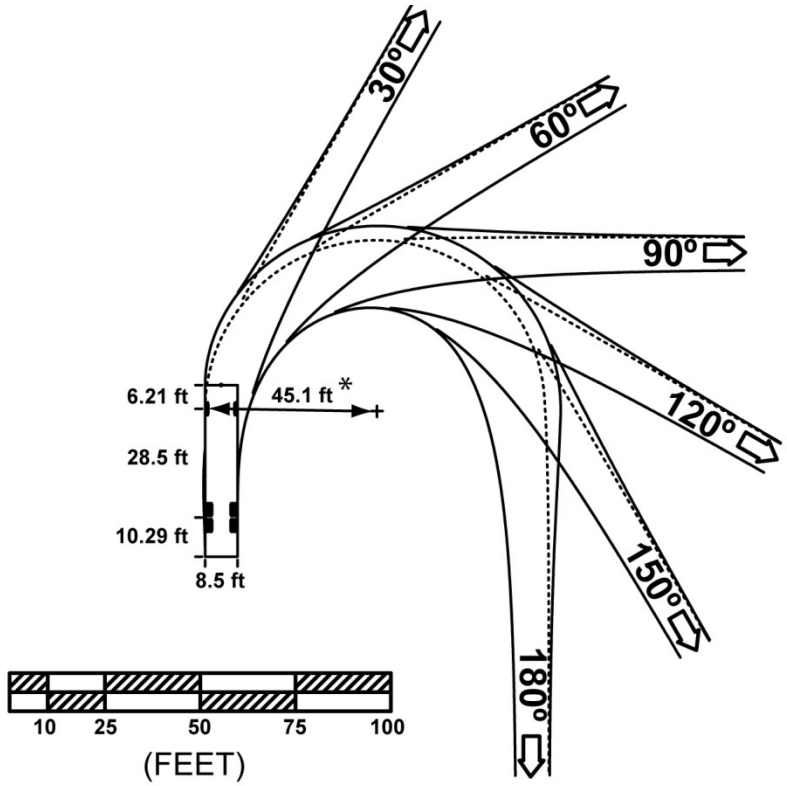
40' BUS

Width	: 8.5'
Track	: 8.5'
Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 41.0 degrees

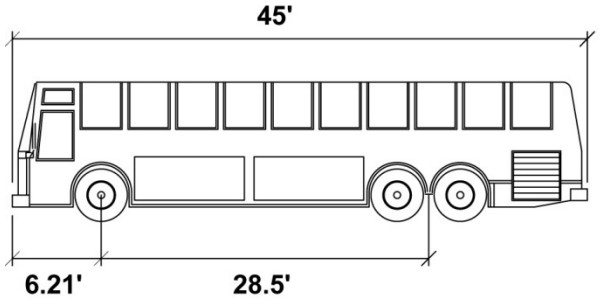
Note: For definitions, see Indexes 404.1 and 404.5.

Figure 404.5F

45-Foot Bus & Motorhome Design Vehicle



* Radius to outside wheel at beginning of curve.



LEGEND

———	Swept Width (Body)
----------	Tracking Width (Tires)

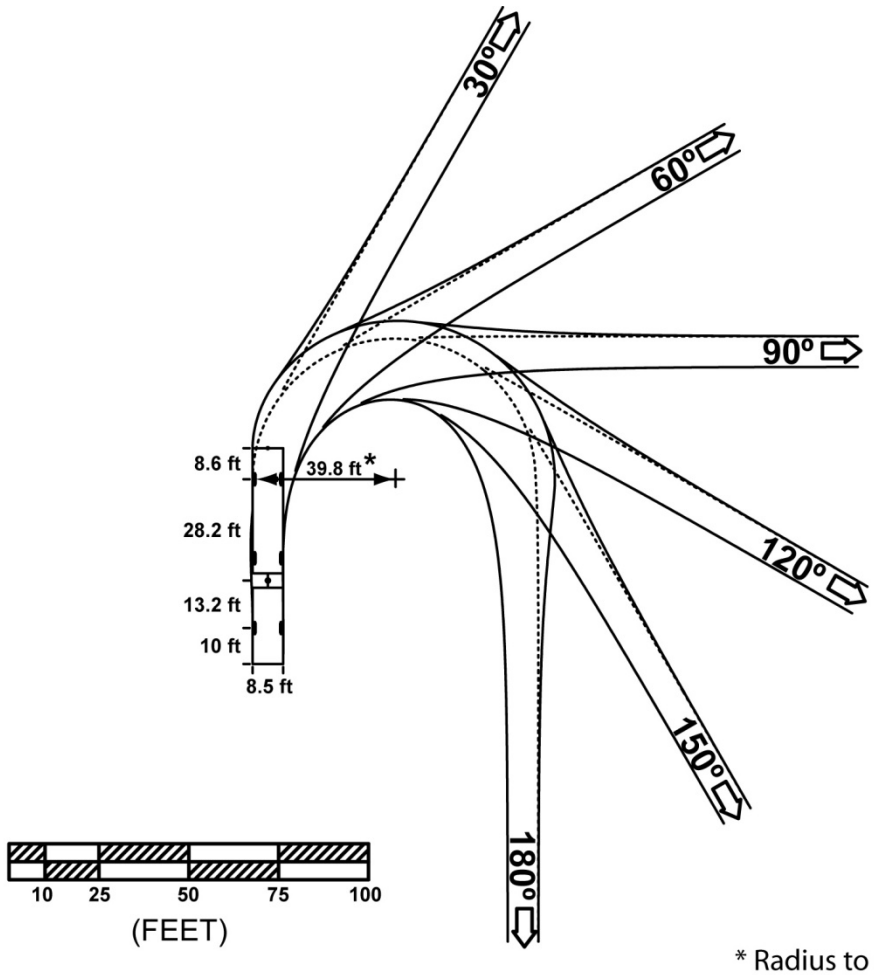
45' BUS

Width	: 8.5'
Track	: 8.5'
Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 44.3 degrees

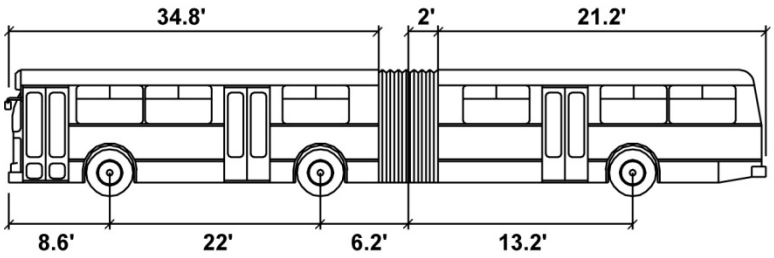
Note: For definitions, see Indexes 404.1, and 404.5.

Figure 404.5G

60-Foot Articulated Bus Design Vehicle



* Radius to outside wheel at beginning of curve.



LEGEND

Swept Width (Body)

Tracking Width (Tires)

ARTICULATED BUS

Width	: 8.5'
Track	: 8.5'
Lock to Lock Time	: 6 seconds
Steering Lock Angle	: 38.3 degrees
Articulating Angle	: 50.0 degrees

Note: For definitions, see Indexes 404.1 and 404.5.

(4) Trailer Track – Semitrailer axle width, measured from outside face of tires.

(5) Lock To Lock Time - The time in seconds that an average driver would take under normal driving conditions to turn the steering wheel of a vehicle from the lock position on one side to the lock position on the other side. The default in AutoTurn software is 6 seconds.

(6) Steering Lock Angle - The maximum angle that the steering wheels can be turned. It is further defined as the average of the maximum angles made by the left and right steering wheels with the longitudinal axis of the vehicle.

(7) Articulating Angle - The maximum angle between the tractor and semitrailer.

Topic 405 - Intersection Design Standards

405.1 Sight Distance

(1) Stopping Sight Distance. See Index 201.1 for minimum stopping sight distance requirements.

(2) *Corner Sight Distance*.

(a) General--At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle, bicyclist or pedestrian stopped on the minor road and the driver of an approaching vehicle on the major road that has no stop. Line of sight for all users should be included in right of way, in order to preserve sight lines.

Adequate time should be provided for the stopped vehicle on the minor road to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed. The visibility required for these maneuvers form a clear sight triangle with the corner sight distance b and the crossing distance a_1 or a_2 (see Figure 405.1 as an example of corner sight distance at a two-lane, two-way highway). Dimensions a_1 and a_2 are measured from the decision point to the center of the lane. The actual number of lanes will vary on the major and minor roads. There should be no sight obstruction within the clear sight triangle.

The methodology used for the driver on the minor road that is stopped to complete the necessary maneuver while the approaching vehicle travels at the design speed of the major road is based on gap-acceptance behavior. A 7-1/2 second criterion is applied to a passenger car (including pickup trucks) for a left turn from a stop on the minor road. However, this time gap does not account for a single-unit truck (no semitrailer), a combination truck (see Index 404.4 for truck tractor-semitrailer guidance), a right-turn from a stop, or for a crossing maneuver. See Table 405.1A for the time gap that addresses these situations for the assumed design vehicle making these maneuvers from the minor road.

In determining corner sight distance, a set back distance for the vehicle waiting on the minor road must be assumed as measured from the edge of traveled way of the major road. Set back for the driver of the vehicle on the minor road should be a minimum of 10 feet plus the shoulder width of the major road but not less than 15 feet. The location of the driver's eye for the set back is the decision point per Figure 405.1. Corner sight distance and the driver's eye set back are also illustrated in Figures 405.7 and 504.3I. Line of sight for corner sight distance for passenger cars is to be determined from a 3 and 1/2-foot height at the location of the driver of the vehicle in the center of the minor road lane to a 3 and 1/2-foot object height in the center of the approaching outside lane of the major road. This provides for reciprocal sight by both vehicles. The passenger car driver's eye height should be applied to all minor roads. In addition, a truck driver's eye height of 7.6 feet should be applied to the minor road where applicable. Additionally, if the major road has a median barrier, a 2-foot object height should be used to determine the median barrier set back. A median that is wide enough to accommodate a stopped vehicle should also provide a clear sight triangle.

The minimum corner sight distance (feet) should be determined by the equation: $1.47V_mT_g$, where V_m is the design speed (mph) of the major road and T_g is the time gap (seconds) for the minor road vehicle to enter the major road. The values given in Table 405.1A should be used to determine T_g based on the design vehicle, the type of maneuver, and whether the stopped vehicle's rear wheels are on an upgrade exceeding 3 percent. The distance from the edge of traveled way to the rear wheels at the minor road stop location should be assumed as: 20 feet for a passenger car, 30 feet for a single-unit truck, and 72 feet for a combination truck.

(b) Public Road Intersections (Refer to Topic 205)--At unsignalized public road intersections (see Index 405.7) corner sight distance applies.

At signalized intersections the corner sight distances should also be applied whenever possible. Even though traffic flows are designed to move at separate times, unanticipated conflicts can occur due to violation of signal, right turns on red, malfunction of the signal, or use of flashing red/yellow mode.

The minimum value for corner sight distance at signalized intersections should be equal to the stopping sight distance as given in Table 201.1, measured as previously described. This includes an urban driveway that forms a leg of the signalized intersection.

(c) Private Road Intersections (Refer to Index 205.2) and Rural Driveways (Refer to Index 205.4)--The minimum corner sight distance should be equal to the stopping sight distance as given in Table 201.1, measured as previously described.

(d) Urban Driveways (Refer to Index 205.3)--Corner sight distance requirements as described above are not applied to urban driveways. If parking is allowed on the major road, parking should be prohibited on both sides of the driveway per the California MUTCD, 3B.19.

(3) Decision Sight Distance. At intersections where the State route turns or crosses another State route, the decision sight distance values given in Table 201.7 should be used. In computing and measuring decision sight distance, the 3.5-foot eye height and the 0.5-foot object height should be used, the object being located on the side of the intersection nearest the approaching driver.

The application of the various sight distance requirements for the different types of intersections is summarized in Table 405.1B.

Table 405.1B
Application of Sight Distance Requirements

Intersection Types	Sight Distance		
	Stopping	Corner	Decision
Private Roads	X	X(1)	
Public Streets and Roads	X	X	
Signalized Intersections	X	X(2)	
State Route Intersections & Route Direction Changes, with or without Signals	X	X	X

NOTES:
(1) Per Index 405.1(2)(c), the minimum corner sight distance shall be equal to the stopping sight distance as given in Table 201.1. See Index 405.1(2)(a) for setback requirements.
(2) Apply corner sight distance requirements at signalized intersections whenever possible due to unanticipated violations of the signals or malfunctions of the signals. See Index 405.1(2)(b).

(4) Acceleration Lanes for Turning Moves onto State Highways. At rural intersections, with "STOP" control on the local cross road, acceleration lanes for left and right turns onto the State facility should be considered. At a minimum, the following features should be

Figure 405.1
Corner Sight Distance

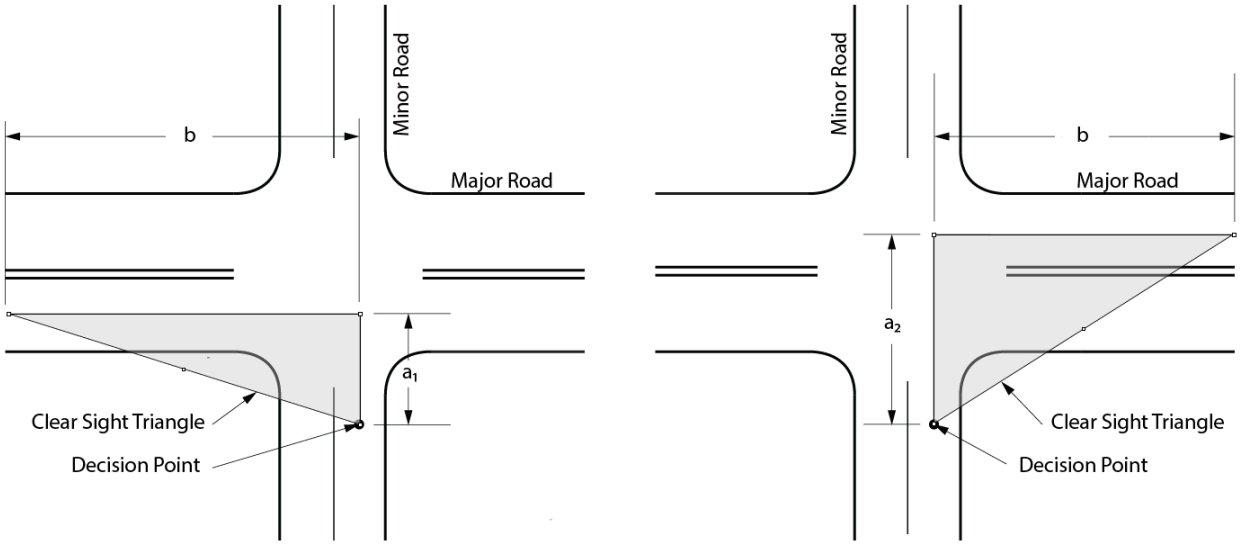


Table 405.1A
Corner Sight Distance Time Gap (T_g) for Unsignalized Intersections

Design Vehicle	Left-turn from Stop (s)	Right-turn from Stop and Crossing Maneuver (s)
Passenger Car	7½	6½
Private Road Intersection		
Rural Driveway		
Single-Unit Truck	9½	8½
Public Road Intersection		
Combination Truck	11½	10½
Major and Minor Roads on Routes:		
National Network		
Terminal or Service Access		
California Legal		
KPRA Advisory		

Notes: Time gaps are for a stopped vehicle to turn left, right or cross a two-lane highway with no median and with minor road grades of 3 percent or less. The table values should be adjusted as follows:
(1) For multilane highways—When crossing or making a left-turn onto a two-way major road with more than two lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane to be crossed. Median widths should be converted to an equivalent number of lanes in applying the 0.5 s and 0.7 s criteria. For example, an 18-foot wide median is equivalent to 1.5 lanes; this requires an additional 0.75 s for a passenger car to cross or an additional 1.05 s for a truck to cross.
(2) For minor road approach grades—If the minor road approach grade is an upgrade that exceeds 3 percent and the rear wheels of the design vehicle are on the grade exceeding 3 percent, add 0.2 s for each percent grade for left-turns; or add 0.1 s for each percent grade for right-turns and crossing maneuvers. For example, a passenger car is turning right from a minor road and at the stop location its rear wheels are on a 4 percent upgrade; this requires an additional 0.4 s for the right-turn.
(3) Unique situations may necessitate a different design vehicle for a particular minor road than those listed here (e.g., predominant combination trucks out of a rural driveway). Additionally, for intersections at skewed angles less than 60 degrees, a further adjustment is needed. See the AASHTO "A Policy on Geometric Design of Highways and Streets" for guidance.

evaluated for both the major highway and the cross road:

- divided versus undivided
- number of lanes
- design speed
- gradient
- lane, shoulder and median width
- traffic volume and composition of highway users, including trucks and transit vehicles
- turning volumes
- horizontal curve radii
- sight distance
- proximity of adjacent intersections
- types of adjacent intersections

For additional information and guidance, refer to AASHTO, A Policy on Geometric Design of Highways and Streets, the District Traffic Engineer or designee, the District Design Liaison, and the Project Delivery Coordinator.

405.2 Left-turn Channelization

(1) General. The purpose of a left-turn lane is to expedite the movement of through traffic by, controlling the movement of turning traffic, increasing the capacity of the intersection, and improving safety characteristics.

The District Traffic Branch normally establishes the need for left-turn lanes.

(2) Design Elements.

(a) Lane Width – **The lane width for both single and double left-turn lanes on State highways shall be 12 feet.**

For conventional State highways with posted speeds less than or equal to 40 miles per hour and AADTT (truck volume) less than 250 per lane that are in urban, city or town centers (rural main streets), the minimum lane width shall be 11 feet.

When considering lane width reductions adjacent to curbed medians, refer to Index 303.5 for guidance on effective roadway width, which may vary depending on drivers' lateral positioning and shy distance from raised curbs.

(b) Approach Taper -- On conventional highways without a median, an approach taper provides space for a left-turn lane by moving traffic laterally to the right. The approach taper is unnecessary where a median is available for the full width of the left-turn lane. Length of the approach taper is given by the formula on Figures 405.2A, B and C.

Figure 405.2A shows a standard left-turn channelization design in which all widening is to the right of approaching traffic and the deceleration lane (see below) begins at the end of the approach taper. This design should be used in all situations where space is available, usually in rural and semi-rural areas or in urban areas with high traffic speeds and/or volumes.

Figures 405.2B and 405.2C show alternate designs foreshortened with the deceleration lane beginning at the 2/3 point of the approach taper so that part of the deceleration takes place in the through traffic lane. Figure 405.2C is shortened further by widening half (or other appropriate fraction) on each side. These designs may be used in urban areas where constraints exist, speeds are moderate and traffic volumes are relatively low.

(c) Bay Taper -- A reversing curve along the left edge of the traveled way directs traffic into the left-turn lane. The length of this bay taper should be short to clearly delineate the left-turn move and to discourage through traffic from drifting into the left-turn lane. Table 405.2A gives offset data for design of bay tapers. In urban areas, lengths of 60 feet and 90 feet are normally used. Where space is restricted and speeds are low, a 60-foot bay taper is appropriate. On rural high-speed highways, a 120-foot length is considered appropriate.

(d) Deceleration Lane Length -- Design speed of the roadway approaching the intersection

should be the basis for determining deceleration lane length. It is desirable that deceleration take place entirely off the through traffic lanes. Deceleration lane lengths are given in Table 405.2B; the bay taper length is included. Where partial deceleration is permitted on the through lanes, as in Figures 405.2B and 405.2C, design speeds in Table 405.2B may be reduced

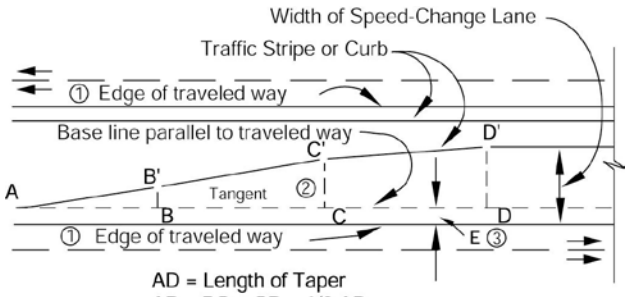
10 miles per hour to 20 miles per hour for a lower entry speed. In urban areas where cross streets are closely spaced and deceleration lengths cannot be achieved, the District Traffic branch should be consulted for guidance.

(e) Storage Length -- At unsignalized intersections, storage length may be based on the number of turning vehicles likely to arrive in an average 2-minute period during the peak hour. At a minimum, space for 2 vehicles should be provided at 25 feet per vehicle. If the peak hour truck traffic is 10 percent or more, space for at least one passenger car and one truck should be provided. Bus usage may require a longer storage length and should be evaluated if their use is anticipated.

At signalized intersections, the storage length may be based on one and one-half to two times the average number of vehicles that would store per signal cycle depending on cycle length, signal phasing, and arrival and departure rates. At a minimum, storage length should be calculated in the same manner as unsignalized intersection. The District Traffic Branch should be consulted for this information.

When determining storage length, the end of the left-turn lane is typically placed at least 3 feet, but not more than 30 feet, from the nearest edge of shoulder of the intersecting roadway. Although often set by the placement of a crosswalk line or limit line, the end of the storage lane should always be located so that the appropriate turning template can be accommodated.

Table 405.2A
Bay Taper for Median Speed-change Lanes



	LENGTH OF TAPER - feet			OFFSET DISTANCE			
	60	90	120	DD' = 10'	DD' = 11'	DD' = 12'	
	Distance From Point "A"						
	-	-	-	0.00	0.00	0.00	
	5	7.5	10.0	0.16	0.17	0.19	
	10	15.0	20.0	0.62	0.69	0.75	
	15	22.5	30.0	1.41	1.55	1.69	
B'	20	30.0	40.0	2.50	2.75	3.00	B'
	30	45.0	60.0	5.00	5.50	6.00	
C'	40	60.0	80.0	7.50	8.25	9.00	C'
	45	67.5	90.0	8.59	9.45	10.31	
	50	75.0	100.0	9.38	10.31	11.25	
	55	82.5	110.0	9.84	10.83	11.81	
	60	90.0	120.0	10.00	11.00	12.00	

NOTES:

(1) The table gives offsets from a base line parallel to the edge of traveled way at intervals measured from point "A". Add "E" for measurements from edge of traveled way.
(2) Where edge of traveled way is a curve, neither base line nor taper between B & C will be a tangent. Use proportional offsets from B to C.
(3) The offset "E" is usually 2 ft along edge of traveled way for curbed medians; Use "E" = 0 ft. for striped medians.

Table 405.2B
Deceleration Lane Length

Design Speed (mph)	Length to Stop (ft)
30	235
40	315
50	435
60	530

(3) Double Left-turn Lanes. At signalized intersections on multilane conventional highways and on multilane ramp terminals, double left-turn lanes should be considered if the left-turn demand is 300 vehicles per hour or more. The lane widths and other design elements of left-turn lanes given under Index 405.2(2) applies to double as well as single left-turn lanes.

The design of double left-turn lanes can be accomplished by adding one or two lanes in the median. See "Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians", published by Headquarters, Division of Traffic Operations, for the various treatments of double left-turn lanes.

(4) Two-way Left-turn Lane (TWLTL). The TWLTL consists of a striped lane in the median of an arterial and is devised to address the special capacity and safety problems associated with high-density strip development. It can be used on 2-lane highways as well as multilane highways. Normally, the District Traffic Operations Branch should determine the need for a TWLTL.

The minimum width for a TWLTL shall be 12 feet (see Index 301.1). The preferred width is 14 feet. Wider TWLTL's are occasionally provided to conform with local agency standards. However, TWLTL's wider than 14 feet are not recommended, and in no case should the width of a TWLTL exceed 16 feet. Additional width may encourage drivers in opposite directions to use the TWLTL simultaneously.

405.3 Right-turn Channelization

(1) General. For right-turning traffic, delays are less critical and conflicts less severe than for left-turning traffic. Nevertheless, right-turn lanes can be justified on the basis of capacity, analysis, and crash experience.

In rural areas a history of high speed rear-end collisions may warrant the addition of a right-turn lane.

In urban areas other factors may contribute to the need such as:

- High volumes of right-turning traffic causing backup and delay on the through lanes.
- Conflicts between crossing pedestrians and right-turning vehicles and bicycles.
- Frequent rear-end and sideswipe collisions involving right-turning vehicles.

Where right-turn channelization is proposed, lower speed right-turn lanes should be provided to reduce the likelihood of conflicts between vehicles, pedestrians, and bicyclists.

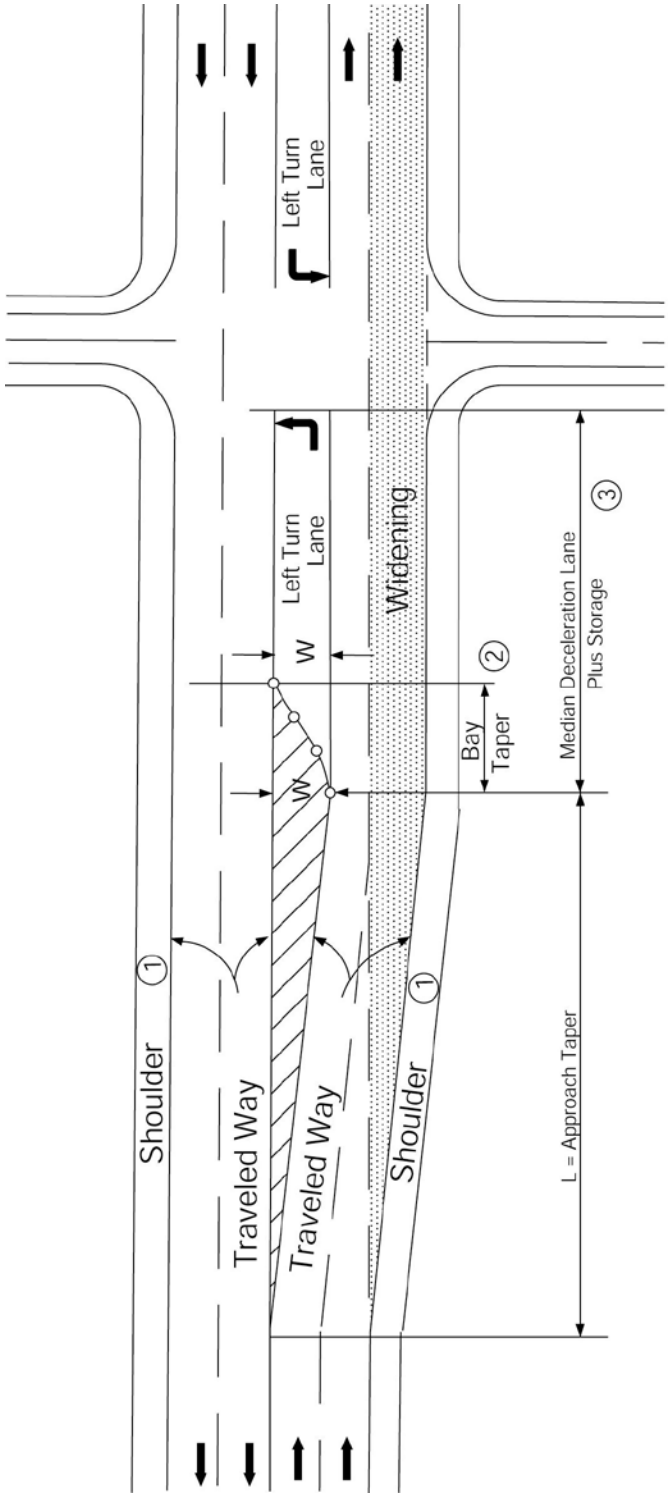
(2) Design Elements.

(a) Lane and Shoulder Width--**Index 301.1 shall be used for right-turn lane width requirements. Shoulder width shall be a minimum of 4 feet.** Although not desirable, lane and shoulder widths less than those given above can be considered for right-turn lanes under the following conditions pursuant to Index 82.2:

- In urban, city or town centers (rural main streets) with posted speeds less than 40 miles per hour in severely constrained situations, if truck or bus use is low, consideration may be given to reducing the right-turn lane width to 10 feet.
- Shoulder widths may also be considered for reduction under constricted situations. Whenever possible, at least a 2-foot shoulder should be provided where the right-turn lane is adjacent to a curb. Entire omission of the shoulder should only be considered in constrained situations and where an 11-foot lane can be constructed.

  Gutter pans can be included within a shoulder, but cannot be included as part of the travel lane width. Additional right of way for a future right-turn lane should be considered when an intersection is being designed.

Figure 405.2A
Standard Left-turn Channelization



EQUATION: L = Use WV, for $V \geq 45$mph ④
Or $WV^2/60$, for $V < 45$mph

Where L = Length of Approach Taper - feet
V = Design Speed - mph
W = Width of Median Lane - feet

NOTES:

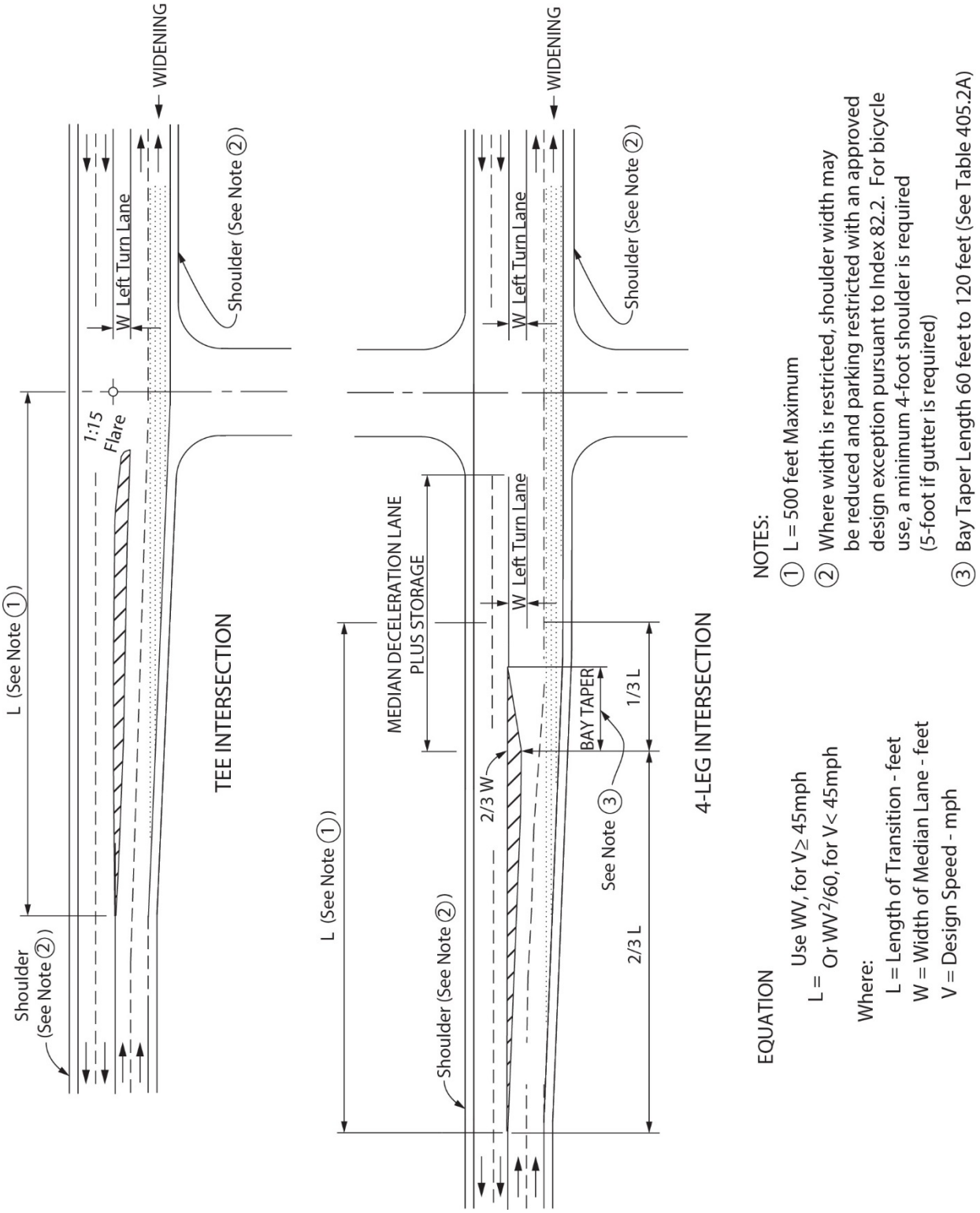
① Where width is restricted, shoulder width may be reduced and parking restricted with an approved design exception pursuant to Index 82.2.
For bicycle use, a minimum 4-foot shoulder is required (5-foot if gutter is present).

② Bay taper length = 60 feet to 120 feet. (See Table 405.2A)

③ For deceleration lane length see Table 405.2B.

④ Where both sides of roadway are widened, use a fraction of "W" that is proportional to widening on each side.

Figure 405.2B
Minimum Median Left-turn Channelization
(Widening on one Side of Highway)



NOTES:

① L = 500 feet Maximum

② Where width is restricted, shoulder width may be reduced and parking restricted with an approved design exception pursuant to Index 82.2. For bicycle use, a minimum 4-foot shoulder is required (5-foot if gutter is required)

③ Bay Taper Length 60 feet to 120 feet (See Table 405.2A)

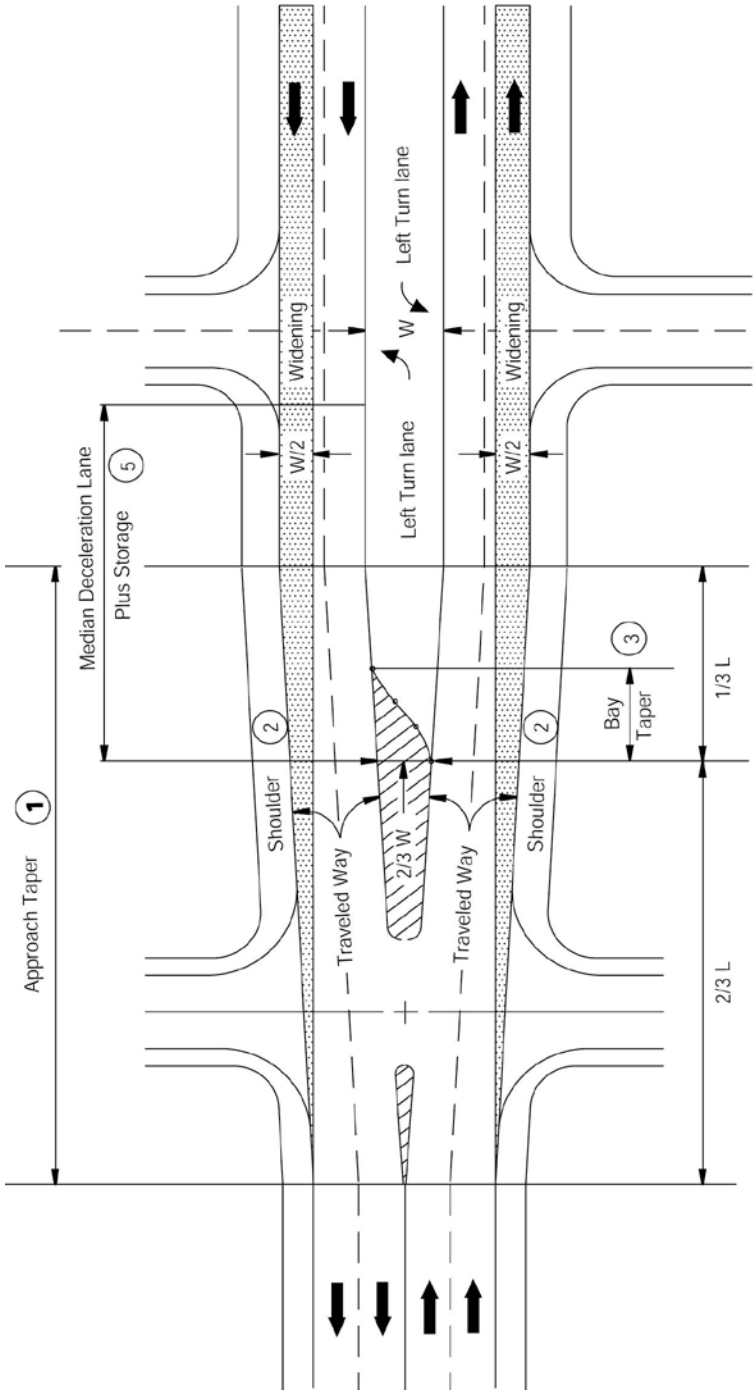
EQUATION

$$L = \begin{cases} \text{Use } WV, \text{ for } V \geq 45\text{mph} \\ \text{Or } WV^2/60, \text{ for } V < 45\text{mph} \end{cases}$$

Where:

L = Length of Transition - feet
W = Width of Median Lane - feet
V = Design Speed - mph

Figure 405.2C
Minimum Median Left-turn Channelization
(Widening on Both Sides in Urban Areas with Short Blocks)



NOTES:

① L = 500 feet Maximum

② Where width is restricted, shoulder width may be reduced and parking restricted with an approved design exception pursuant to Index 82.2. For bicycle use, a minimum 4 feet shoulder is required (5 feet if gutter is present).

③ Bay taper length = 60 feet to 120 feet. (See Table 405.2A)

④ Assumes equal widening each side. Where widening is unequal, use a fraction that is proportional to widening on each side.

⑤ For deceleration lane length see Table 405.2B.

EQUATION: ④

$L = \begin{cases} \text{Use } (1/2)WV, \text{ for } V \geq 45\text{mph} \\ \text{Or } WV^2/120, \text{ for } V < 45\text{mph} \end{cases}$

Where L = Length of Approach Taper - feet
W = Width of Median Lane - feet
V = Design Speed - mph

(b) Curve Radius--Where pedestrians are allowed to cross a free right-turning roadway, the curve radius should be such that the operating speed of vehicular traffic is no more than 20 miles per hour at the pedestrian crossing. See NCHRP Report 672, "Roundabouts: An Informational Guide" for guidance on the determination of design speed (fastest path) for turning vehicles. See Index 504.3(3) for additional information.

(c) Tapers--Approach tapers are usually unnecessary since main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane.

Bay tapers are treated as a mirror image of the left-turn bay taper.

(d) Deceleration Lane Length--The conditions and principles of left-turn lane deceleration apply to right-turn deceleration. Where full deceleration is desired off the high-speed through lanes, the lengths in Table 405.2B should be used. Where partial deceleration is permitted on the through lanes because of limited right of way or other constraints, average running speeds in Table 405.2B may be reduced 10 miles per hour to 20 miles per hour for a lower entry speed. For example, if the main line speed is 50 miles per hour and a 10 miles per hour deceleration is permitted on the through lanes, the deceleration length may be that required for 40 miles per hour.

(e) Storage Length--Right-turn storage length is determined in the same manner as left-turn storage length. See Index 405.2(2)(e).

(3) Right-turn Lanes at Off-ramp Intersections. Diamond off-ramps with a free right-turn at the local street and separate right-turn off-ramps around the outside of a loop will likely cause conflict as traffic volumes increase. Serious conflicts occur when the right-turning vehicle must weave across multiple lanes on the local street in order to turn left at a major cross street close to the ramp terminal. Furthermore, free right-turns create sight distance issues for pedestrians and bicyclists crossing the off-ramp, or pedestrians crossing the local road. Also, rear-end collisions can occur as right-turning drivers slow down or stop waiting for a gap in local street traffic. Free right-turns usually end up with "YIELD", "STOP", or signal controls thus defeating their purpose of increasing intersection capacity.

405.4 Traffic Islands

A traffic island is an area between traffic lanes for channelization of bicycle and vehicle movements or for pedestrian refuge. An island may be defined by paint, raised pavement markers, curbs, pavement edge, or other devices. The California MUTCD should be referenced when considering the placement of traffic islands at signalized and unsignalized locations. For splitter island guidance at roundabouts, see Index 405.10(13).

Traffic islands usually serve more than one function. These functions may be:

(a) Channelization to confine specific traffic movements into definite channels;

(b) Divisional to separate traffic moving in the same or opposite direction; and

(c) Refuge, to aid users crossing the roadway.

Generally, islands should present the least potential conflict to approaching or crossing bicycles and vehicles, and yet perform their intended function.

(1) Design of Traffic Islands. Island sizes and shapes vary from one intersection to another. They should be large enough to command attention. Channelizing islands should not be less than 50 square feet in area, preferably 75 square feet. Curbed, elongated divisional median islands should not be less than 4 feet wide and 20 feet long. All traffic islands placed in the path of a pedestrian crossing must comply with DIB 82. See the Standard Plans for typical island passageway details.

The approach end of each island should be offset 3 feet to the left and 5 feet to the right of approaching traffic, using standard 1:15 parabolic flares, and clearly delineated so that it does not surprise the motorist or bicyclist. These offsets are in addition to the shoulder

widths shown in Table 302.1. Table 405.4 gives standard parabolic flares to be used in island design. On curved alignment, parabolic flares may be omitted for small triangular traffic islands whose sides are less than 25 feet long.

The approach nose of a divisional island should be highly visible day and night with appropriate use of signs (reflectorized or illuminated) and object markers. The approach nose should be offset 3 feet from the through traffic to minimize accidental impacts.

(2) Delineation of Traffic Islands. Generally, islands should present the least potential conflict to approaching traffic and yet perform their intended function. See Index 303.2 for appropriate curb type. Islands may be designated as follows:

(a) Raised paved areas outlined by curbs.

(b) Flush paved areas outlined by pavement markings.

(c) Unpaved areas (small unpaved areas should be avoided).

On facilities with posted speeds over 40 miles per hour, the use of any type of curb is discouraged. Where curbs are to be used, they should be located at or outside of the shoulder edge, as discussed in Index 303.5.

In rural areas, painted channelization supplemented with raised pavement markers may be more appropriate than a raised curbed channelization. This design is as forgiving as possible and decreases the consequence of a driver's or bicyclist's failure to detect or recognize the curbed island. Consideration for snow removal operations should be determined where appropriate.

In urban areas, posted speeds less than or equal to 40 miles per hour allow more frequent use of curbed islands. Local agency requirements and matching existing conditions are factors to consider.

(3) Pedestrian Refuge

Pedestrian refuge islands allow pedestrians to cross fewer lanes at a time while judging conflicts separately. They also provide a refuge so slower pedestrians can wait for a gap in traffic while reducing total crossing distance.

At unsignalized intersections in rural city/town centers (rural main streets), suburban, or urban areas, a pedestrian refuge should be provided between opposing traffic where pedestrians are allowed to cross 2 or more through traffic lanes in one direction of travel, at marked or unmarked crosswalks. Pedestrian islands at signalized crosswalks should be considered, taking into account crossing distance and pedestrian activity. Note that signalized pedestrian crossings must be timed to allow for pedestrians to cross. See the California MUTCD, Chapter 4E, for further guidance.

Traffic islands used as pedestrian refuge are to be large enough to provide a minimum of 6 feet in the direction of pedestrian travel, without exception.

All traffic islands placed in the path of a pedestrian crossing must be accessible, refer to DIB 82 and the Standard Plans for further guidance. An example of a traffic island that serves as a pedestrian refuge is shown on Figure 405.4.

405.5 Median Openings

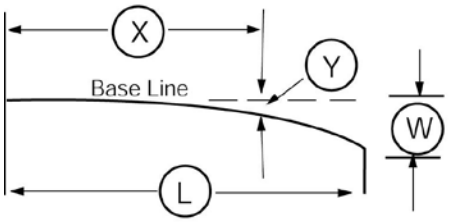
(1) General. Median openings, sometimes called crossovers, provide for crossings of the median at designated locations. Except for emergency passageways in a median barrier, median openings are not allowed on urban freeways.

Median openings on expressways or divided conventional highways should not be curbed except when the median between openings is curbed, or it is necessary for delineation of traffic signal standards and other necessary hardware, or for protection of pedestrians. In these special cases B4 curbs should be used. An example of a median opening design is shown on Figure 405.5.

(2) Spacing and Location. By a combination of interchange ramps and emergency passageways, provisions for access to the opposite side of a freeway may be provided for law enforcement, emergency, and maintenance vehicles to avoid extreme out-of-direction travel. Access should not be more frequent

Table 405.4

Parabolic Curb Flares Commonly Used



$$Y = \frac{W X^2}{L^2}$$

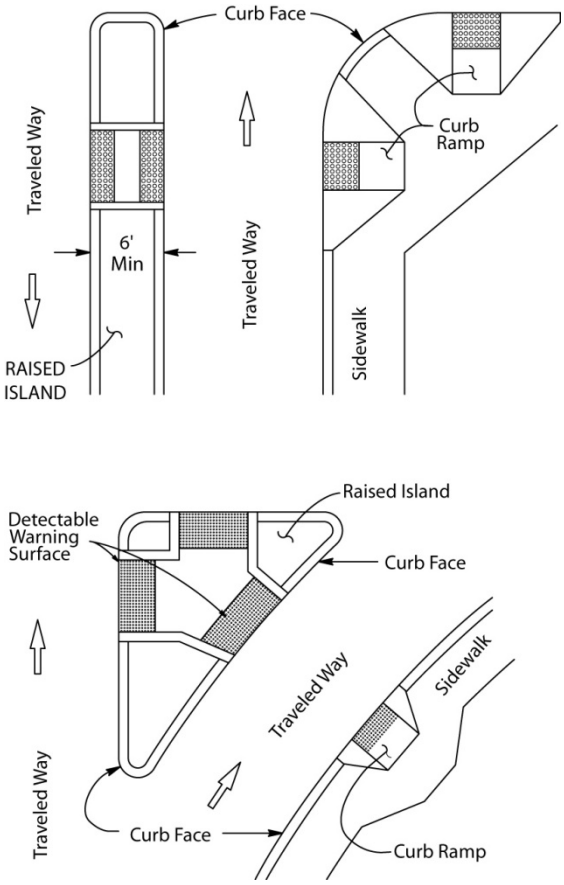
L = Length of flare in feet
W = Maximum offset in feet
X = Distance along base line in feet
Y = Offset from base line in feet

W is shown in table thus

OFFSET IN FEET FOR GIVEN "X" DISTANCE																
L Length of Flare / X Distance	10	15	20	25	30	40	45	50	60	70	75	80	90	100	110	120
1:5 FLARES																
25	0.80	1.80	3.20	5.00												
50	0.40		1.60		3.60	6.40		10.00								
1:10 FLARES																
50	0.20		0.80		1.80	3.20		5.00								
100	0.10		0.40		0.90	1.60		2.50	3.60	4.90		6.40	8.10	10.00		
1:15 FLARES																
45	0.15		0.59		1.33	2.37	3.00									
75	0.09		0.36		0.80	1.42		2.22	3.20	4.36	5.00					
90	0.07		0.30		0.67	1.19		1.85	2.67	3.63		4.74	6.00			
120	0.06		0.22		0.50	0.89		1.39	2.00	2.72		3.56	4.50	5.56	6.72	8.00

Figure 405.4

Pedestrian Refuge Island



than at three-mile intervals. See Traffic Safety Systems Guidance for additional information on the design of emergency passageways.

Emergency passageways should be located only where decision sight distance is available (see Table 201.7).

Median openings at close intervals on other types of highways create conflicts with high speed through traffic. Median openings should be spaced at intervals no closer than 1600 feet. If a median opening falls within 300 feet of an access opening, it should be placed opposite the access opening.

(3) Length of Median Opening. For any three or four-leg intersection on a divided highway, the length of the median opening should be at least as great as the width of the crossroads pavement, median width, and shoulders. An important factor in designing median openings is the path of the design vehicle making a minimum left turn at 5 miles per hour to 10 miles per hour. The length of median opening varies with width of median and angle of intersecting road.

Usually a median opening of 60 feet is adequate for 90 degree intersections with median widths of 22 feet or greater. When the median width is less than 22 feet, a median opening of 70 feet is needed. When the intersection angle is other than 90 degrees, the length of median opening should be established by using truck turn templates (see Index 404.3).

(4) Cross Slope. The cross slope in the median opening should be limited to 5 percent. Crossovers on curves with super elevation exceeding 5 percent should be avoided. This cross slope may be exceeded when an existing 2-lane roadbed is converted to a 4-lane divided highway. The elevation of the new construction should be based on the 5 percent cross slope requirement when the existing roadbed is raised to its ultimate elevation.

(5) References. For information related to the design of intersections and median openings, "A Policy on Geometric Design of Highways and Streets," AASHTO, should be consulted.

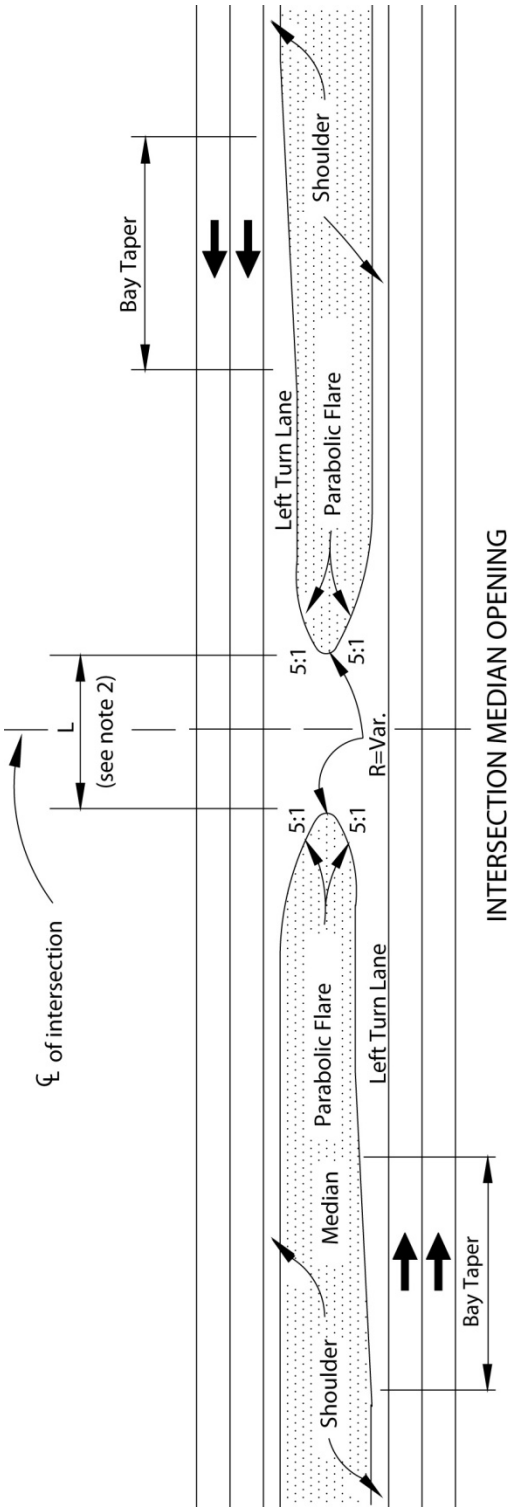
405.6 Access Control

The basic guidance which govern the extent to which access rights are to be acquired at interchanges (see Topic 104, Index 205.1 and 504.8 and the PDPM) also apply to intersections at grade on expressways. Cases of access control which frequently occur at intersections are shown in Figure 405.7. This illustration does not presume to cover all situations. Where required by traffic conditions, access should be extended in order to ensure proper operation of the expressway lanes. Reasonable variations which observe the basic principles referred to above are acceptable.

However, negative impacts on the mobility needs of pedestrians, bicyclists, equestrians, and transit users need to be assessed. Pedestrians and bicyclists are sensitive to additional out of direction travel.

Figure 405.5

Typical Design for Median Openings



NOTES:

① For length of bay taper, see Table 405.2A.

② L = Length of median opening: varies with width of median and angle of intersecting road. Usually for 90° intersection, L = 60 feet for median of 22 feet and wider. L = 70 feet for medians narrower than 22 feet.

③ See Index 405.2.

④ Pedeistrain and bicycle features are not shown on figure.

405.7 Public Road Intersections

The basic design to be used at right-angle public road intersections on the State Highway System is shown in Figure 405.7. The essential elements are sight distance (see Index 405.1) and the treatment of the right-turn on and off the main highway. Encroachment into opposing traffic lanes by the turning vehicle should be avoided or minimized.

(1) Right-turn Onto the Main Highway. The combination of a circular curve joined by a 2:1 taper on the crossroads and a 75-foot taper on the main highway is designed to fit the wheel paths of the appropriate turning template chosen by the designer.

It is desirable to keep the right-turn as tight as practical, so the "STOP" or "YIELD" sign on the minor leg can be placed close to the intersection.

(2) Right-turn Off the Main Highway. The combination of a circular curve joined by a 150-foot taper on the main highway and a 4:1 taper on the crossroads is designed to fit the wheel paths of the appropriate turning template and to move the rear of the vehicle off the main highway. Deceleration and storage lanes may be provided when necessary (see Index 405.3).

(3) Alternate Designs. Offsets are given in Figure 405.7 for right angle intersections. For skew angles, roadway curvature, and possibly other reasons, variations to the right-angle design are permitted, but the basic rule is still to approximate the wheel paths of the design vehicle.

A three-center curve is an alternate treatment that may be used at the discretion of the designer.

Intersections are major consideration in bicycle path design as well. See Indexes 403.6 and 1003.1(5) for general bicycle path intersection design guidance. Also see Section 5.3 of the AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities.

405.8 City Street Returns and Corner Radii

The pavement width and corner radius at city street intersections is determined by the type of vehicle to be accommodated and the mobility needs of pedestrians and bicyclists, taking into consideration the amount of available right of way, the types of adjoining land uses, the place types, the roadway width, and the number of lanes on the intersecting street.

At urban intersections, the California truck or the Bus Design Vehicle template may be used to determine the corner radius. Where STAA truck access is allowed, the STAA Design Vehicle template should be used giving consideration to factors mentioned above. See Index 404.3.

Smaller radii of 15 feet to 25 feet are appropriate at minor cross streets where few trucks or buses are turning. Local agency standards may be appropriate in urban and suburban areas.

Encroachment into opposing traffic lanes must be avoided.

405.9 Widening of 2-lane Roads at Signalized Intersections

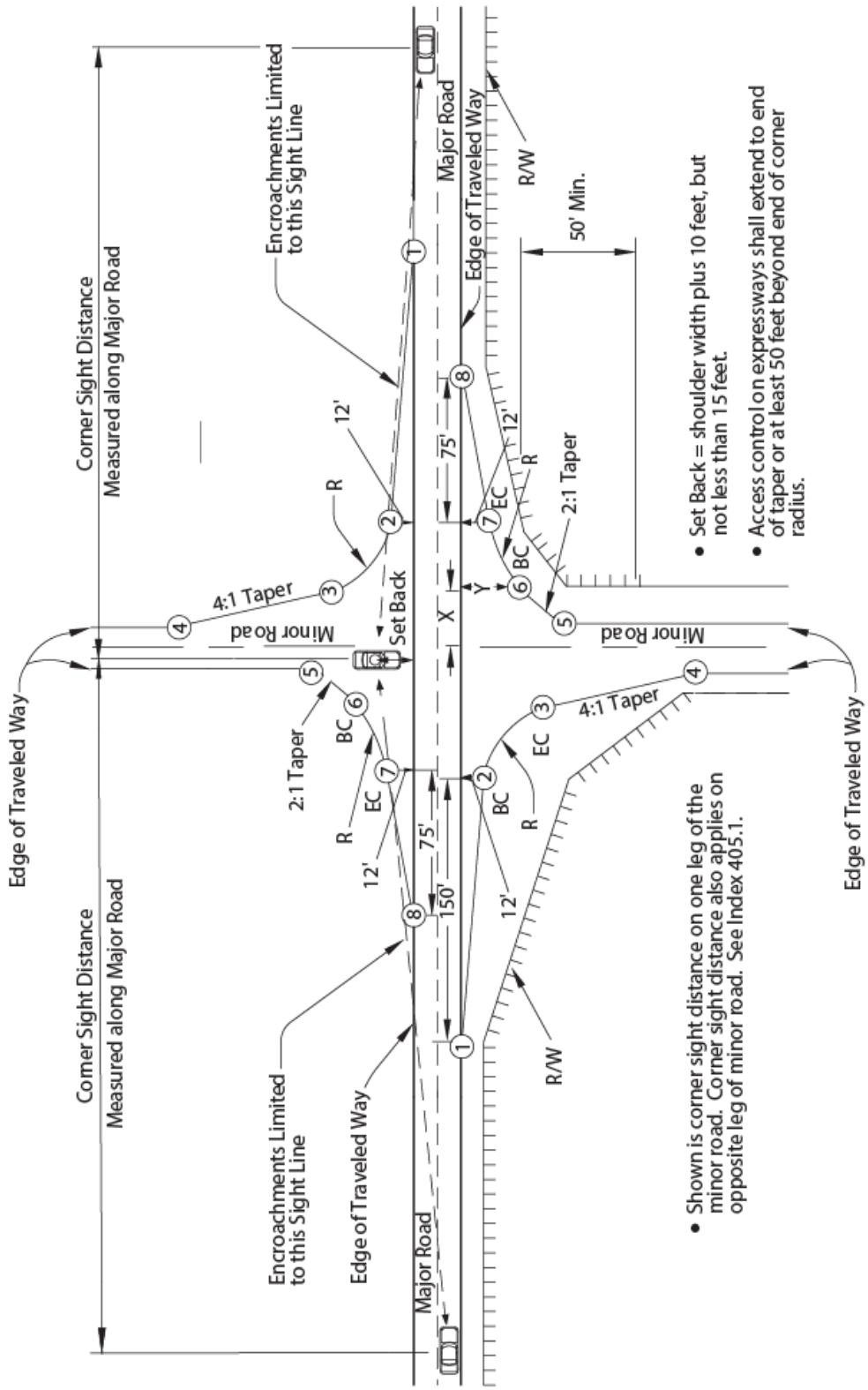
Two-lane State highways may be widened at intersections to 4-lanes whenever signals are installed. Sometimes it may be necessary to widen the intersecting road. The minimum design is shown in Figure 405.9. More elaborate treatment may be warranted by the volume and pattern of traffic movements. Unusual turning movement patterns may possibly call for a different shape of widening.

The impact on pedestrian and bicycle traffic mobility of larger intersections should be assessed before a decision is made to widen an intersection.

405.10 Roundabouts

Roundabout intersections on the State highway system must be developed and evaluated in accordance with National Cooperative Highway Research Program (NCHRP) Report 672 entitled "Roundabouts: An Informational Guide, 2nd ed." (NCHRP Guide 2) dated October 2010 and Traffic Operations Policy Directive (TOPD) Number 13-02. Also see Index 401.5 for general information and guidance. See Figure 405.10 Roundabout Geometric Elements for nomenclature associated with roundabouts. Signs, striping and markings at roundabouts are to comply with the California MUTCD.

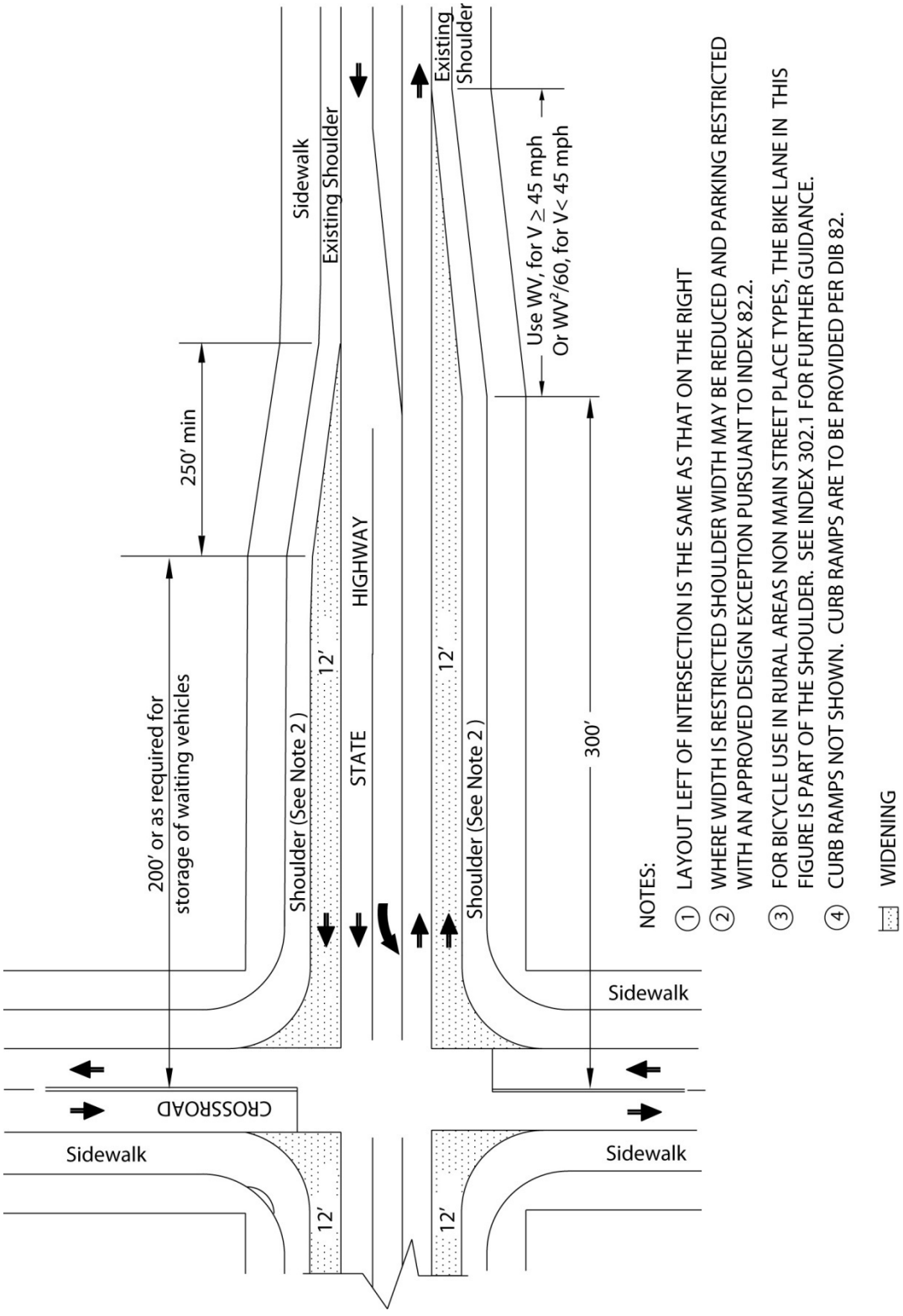
Figure 405.7
Public Road Intersections



Radius of Curve	Design Vehicle	Pt ①		Pt ②		Pt ③		Pt ④		Pt ⑤		Pt ⑥		Pt ⑦		Pt ⑧	
		X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
30'	Bus	204.20	0.0	54.20	12.0	27.49	34.63	12.0	96.58	12.0	40.66	18.23	28.21	40.32	12.0	115.32	0.0
40'	California	215.08	0.0	65.08	12.0	29.46	42.17	12.0	112.03	12.0	53.35	21.87	33.61	51.33	12.0	126.33	0.0
50'	STAA	226.09	0.0	76.09	12.0	31.57	49.71	12.0	127.98	12.0	75.63	30.31	39.01	67.13	12.0	142.13	0.0

X - Distance measured from centerline of minor road along major road - feet.
Y - Offset distance measured from edge of traveled way of major road to any given point - feet.

Figure 405.9
Widening of Two-lane Roads at Signalized Intersections



A roundabout is a form of circular intersection in which traffic travels counterclockwise around a central island and entering traffic must yield to the circulating traffic. Roundabouts feature, among other things, a central island, a circulatory roadway, and splitter islands on each approach. Roundabouts rely upon two basic and important operating principles:

(a) Speed reduction at the entry and through the intersection will be achieved through geometric design and,

(b) The yield-at-entry rule, which requires traffic entering the intersection to yield to traffic that is traveling in the circulatory roadway.

Benefits of roundabouts are:

- Fewer conflict points typically result in fewer collisions with less severity. Over half of vehicle to vehicle points of conflict associated with intersections are eliminated with the use of a roundabout. Additionally, a roundabout separates the points of conflict which eases the ability of the users to identify a conflict and helps prevent conflicts from becoming collisions.
- Roundabouts are designed to reduce the vehicular speeds at intersections. Lower speeds lessens the vehicular collision severity. Likewise, studies indicate that pedestrian and bicyclist collisions with motorized vehicles at lower speeds significantly reduce their severity.
- Roundabouts allow continuous free flow of vehicles and bicycles when no conflicts exist. This results in less noise and air pollution and reduces overall delays at roundabout intersections.

Except as indicated in this Index, the standards elsewhere in this manual do not apply to roundabouts. For the application of design standards, the approach ends of the splitter islands define the boundary of a roundabout intersection, see Figure 405.10. The design standards elsewhere in this manual apply to the approach legs beyond the approach ends of the splitter islands.

(1) Design Period.

First consider the design of a single lane roundabout per the design period guidance in Index 103.2. If a second lane is not needed until 10 or more years, it may be better to phase the improvements. Construct the first phase of the roundabout so at the 20-year design period, an additional lane can be easily added. In order to comply with the 20-year design period, the initial project must provide the right of way needed for utility relocations, a shared-use path designed for a Class I Bikeway, and all other features other than pavement, lighting, and striping in their ultimate locations.

In some locations, it may not be practical to build a single lane roundabout that will operate for 10 years. Geometric constraints and other conflicts may preclude widening to the ultimate configuration. In such cases, other intersection configurations or control strategies addressed in Index 401.5 may need to be considered.

When staging improvements, see NCHRP Guide 2, Section 6.12.

(2) Design Vehicles - See Topic 404.

The turning path for the design vehicle, see Index 404.5, dictates many of the roundabout dimensions. The design vehicle tracking and swept width are to be used when designing all the entries and exits, where design vehicles are unrestricted (see Index 404.2), and the circulatory roadway. The percentage of trucks and their lane utilization is an important consideration on multilane roundabouts when determining if the design will allow trucks to stay within their own lane or encroach into the adjacent lane. If permit vehicles larger than the design vehicle occasionally use the proposed roundabout, they can be accommodated by having removable signs or other removable features in the central island or around the circular path to ensure their swept path can negotiate the roundabout. Roundabouts should not be overdesigned for the occasional permit vehicle.

To accurately simulate the design vehicle swept width traveling through a roundabout, the minimum speed of the design vehicle used in computer simulation software (e.g., Auto

TURN) should be 10 miles per hour through the roundabout.

(3) Inscribed Circle Diameter.

At single lane roundabouts, the size of the inscribed circle is largely dependent upon the turning requirements of the design vehicle. The inscribed circle diameter (ICD) must be large enough to accommodate: (a) the STAA design vehicle for all roundabouts on the National Network and on Terminal Access routes; and, (b) the California Legal design vehicle on all non-STAA route intersections on California Legal routes and California Legal KPRA Advisory routes, while maintaining adequate deflection curvature to ensure appropriate travel speeds for smaller vehicles. The design vehicle is to navigate the roundabout with the front tractor wheels off the truck apron, if one is present. Transit vehicles, fire engines and single-unit delivery vehicles are also to be able to navigate the roundabout without using the truck apron, if one is present. The inscribed circle diameter for a single lane roundabout generally ranges between 105 feet to 150 feet to accommodate the California Legal design vehicle and 130 feet to 180 feet to accommodate the STAA design vehicle.

At multilane roundabouts, the inscribed circle diameter is to achieve adequate alignment of the natural vehicle path while maintaining deflection curvature to ensure appropriate travel speeds. To achieve both of these design objectives requires a slightly larger diameter than used for a single lane roundabout. The inscribed circle diameter for a multilane (2-lane) roundabout generally ranges between 150 feet to 220 feet to accommodate the California Legal design vehicle for non-STAA route intersections on California Legal routes and California Legal KPRA Advisory routes, and 165 feet to 220 feet to accommodate the STAA design vehicle for roundabouts on the National Network and on Terminal Access routes. Similar to a single lane roundabout, the design vehicle is to be able to navigate a multilane roundabout with the front tractor wheels staying off the truck apron, if one is present. Transit vehicles, fire engines and single-unit delivery vehicles are also to be able to navigate the roundabout without using the truck apron, if one is present.

The inscribed diameter ranges given above are typical values, design may be larger or smaller. Site location constraints and performance checks will determine if the diameter is appropriate for the location.

(4) Entry Speeds.

Lowering the speed of vehicles entering and traveling through the roundabout is a primary design objective that is achieved by approach alignment and entry geometry.

The following entry speeds should not be exceeded:

- Single lane entry, 25 miles per hour.
- Multilane entry, 30 miles per hour.

A bypass lane is not included in the number of entry lanes. A bypass prohibits entry into the circulatory roadway.

Entry speeds are to be determined through fastest path analysis. Fastest path is the smoothest, flattest path possible for a single vehicle in the absence of other traffic and ignoring all lane markings. The fastest path analysis should begin at least 165 feet from the inscribed circle diameter and should not bring the path closer than 3 feet from a stripe nor 5 feet from the face of a curb. These distances are minimums and the fastest path may occur further away from the curbs and striping depending on the roundabout configuration. For fastest path evaluation, see NCHRP Guide 2, Section 6.7.1.

(5) Exit Design.

Similar to entry design, exit design flexibility is required to achieve the optimal balance between competing design variables and project objectives to provide adequate capacity and, essentially, safety while minimizing excessive property impacts and costs. Thus, the selection of a curved versus tangential design is to be based upon the balance of each of these criteria. Exit design is influenced by the place type, pedestrian demand, bicyclist needs, the design vehicle

and physical constraints. The exit curb radii are usually larger than the entry curb radii in order to minimize the likelihood of congestion and crashes at the exits. However, the desire to minimize congestion at the exits needs to be balanced with the need to maintain an appropriate operating speed through the pedestrian crossing. Therefore, the exit path radius should not be significantly greater than the circulating path radius to ensure low speeds are maintained at the pedestrian crossing.

(6) Number of Legs Serving the Roundabout.

Intersections with more than four legs are often difficult to manage operationally. Roundabouts are a proven traffic control device in such situations. However, it is necessary to ensure that the design vehicle can maneuver through all unrestricted legs of the roundabout.

(7) Pedestrian Use.

Sidewalks around the circular roadway are to be designed as shared-use paths, see Index 405.10(8)(c). However, the guidance in Design Information Bulletin (DIB) 82 Pedestrian Accessibility Guidelines for Highway Projects must also be followed when designing these shared-use facilities around a roundabout. If there is a difference in the standards, the guidance in DIB 82 is to be followed. In addition,

(a) Pedestrian curb ramps need to be differentiated from bike ramps:

- The detectable warning surface (truncated domes) differentiates a pedestrian curb ramp from a bicycle ramp.
- Detectable warning surface is required on curb ramps. They are not to be used on a bike ramp.

(b) Truck aprons and mountable curbs are not to be placed in the pedestrian crossing areas.

(c) See the California MUTCD for the signs and markings used at roundabouts.

(d) At pedestrian crossing locations the accessibility design will be treated as a midblock pedestrian street crossing. See DIB 82 for more information.

(8) Bicyclist Use.

(a) General. Bicyclists may choose to travel in the circular roadway of a roundabout by taking a lane, while others may decide to travel using the shared-use path to bypass the circular roadway. Therefore, the approach and circular roadways, as well as the shared-use path all need to be designed for the mobility needs of bicyclists. See the California MUTCD for the signs and markings used at roundabouts.

(b) Bicyclist Use of the Circular Roadway. Single lane roundabouts do not require bicyclists to change lanes in the circular roadway to select the appropriate lane for their direction of travel, so they tend to be comfortable for bicyclists to use. Even two-lane roundabouts, which may have straighter paths of travel that can lead to faster vehicular traveling speeds, appear to be comfortable for bicyclists that prefer to travel like vehicles. Roundabouts that have more than two circular lanes can create complexities in signing and striping (see the California MUTCD for guidance), and their operating speed may cause some bicyclists to decide to bypass the circular roadway and use the bicycle ramp that provides access to the shared-use path around the roundabout.

(c) Bicyclists Use of the Shared-Use Path. The shared-use path is to be designed using the guidance in Index 1003.1 for Class I Bikeways and in NCHRP Guide 2 Section 6.8.2.2. However, the accessibility guidance in DIB 82 must also be followed when designing these shared-use facilities around a roundabout. If there is a difference in the standards, the accessibility guidance in DIB 82 is to be followed to ensure the facility is accessible to pedestrians with disabilities.

Bicycle ramps are to be located to avoid confusion as curb ramps for pedestrians. Also see Index 405.10(7) for guidance on how to differentiate the two types of ramps.

The design details and width of the ramp are also important to the bicyclist. Bicyclists approaching the bicycle ramp need to be provided the choice of merging left into the lane or moving right to use the bicycle ramp. Bicycle ramps should be placed at a 35 to 45 degree angle to the departure roadway and the sidewalk to enable the bicyclists to use the ramp and discourage bicyclists from entering the shared-use path at a speed that is detrimental to the pedestrians. The shared-use path should be designated as Class I Bikeways; however, appropriate regulatory signs may need to be posted if the local jurisdiction has a law(s) that prohibit bicyclists from riding on a sidewalk.

A landscape buffer or strip between the shared-use/Class I Bikeway and the circular roadway of the roundabout is needed and should be a minimum of 2 feet wide.

Pedestrian crossings may also be used by bicyclists; thus, these shared-use crossings need to be designed for both bicyclist and pedestrian needs.

(9) Transit Use.

Transit vehicles and buses will not have difficulty negotiating a roundabout when it has been designed using the California Legal design vehicle or the STAA design vehicle. However, to minimize passenger discomfort, a roundabout should be designed such that the transit vehicle or bus does not use the truck apron, if one is present.

(10) Stopping Sight Distance and Visibility.

See Index 201.1 for stopping sight distance guidance at roundabouts.

A domed or mounded central island, between 3.5 to 6 feet high, is needed to focus attention on the approach and through roundabout alignment. A domed central island provides a visual screen from downstream alignment and other distractions and provides a visual cue for vehicles approaching the roundabout.

In high speed environments, additional lighting of, and vertical elements in the central island (i.e., landscaping and esthetic features) may be needed.

(11) Speed Consistency.

Consistency in operating speeds between the various movements within the roundabout can minimize collisions between traffic streams. The operating speeds between competing traffic streams and between consecutive geometric elements should be minimized such that the maximum speed differential between them is no more than 15 miles per hour; it is preferred that the operating speed differential be less than 10 miles per hour.

(12) Path Alignment (Natural Path).

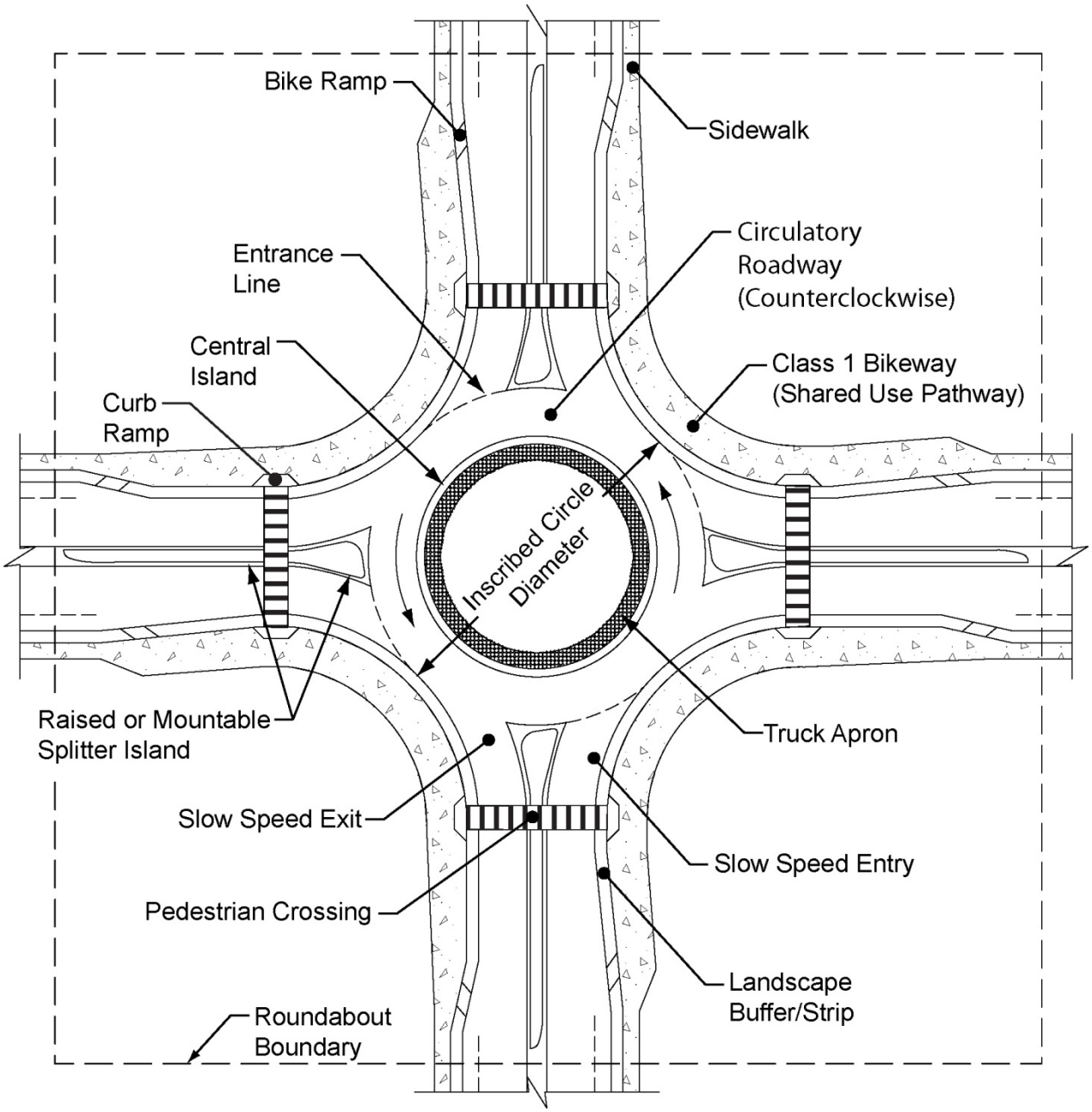
As two traffic streams approach the roundabout in adjacent lanes, drivers and bicyclists will be guided by lane markings up to the entrance line. At the yield point, they will continue along their natural trajectory into the circulatory roadway. The speed and orientation of the design vehicle at the entrance line determines what can be described as its natural path. The geometry of the exits also affects the natural path that the design vehicle travels. The natural path of two vehicles are not to overlap, see NCHRP Guide 2, Section 6.7.2.

(13) Splitter Islands.

Splitter islands (also called separator islands, divisional islands, or median islands) will be provided on all roundabouts. The purpose is to provide refuge for pedestrians, assist in controlling speeds, guide traffic into the roundabout, physically separate entering and exiting traffic streams, and deter wrongway movements.

The total length of the raised island should be at least 50 feet although 100 feet is desirable. On higher speed roadways, splitter island lengths of 150 feet or more is beneficial. Additionally, the splitter island should extend beyond the end of the exit curve to prevent

Figure 405.10
Roundabout Geometric Elements



NOTE:

This figure is provided to only show nomenclature and is not to be used for design details.

exiting traffic from crossing into the path of approaching traffic. The splitter island width should be a minimum of 6 feet at the pedestrian crossing to adequately provide refuge for pedestrians.

Posted speeds on the approach roadway greater than or equal to 45 miles per hour require the splitter island length, as measured from the inscribed circle diameter, to be 200 feet. In some instances, a longer splitter island may be desirable. Concrete curb is to be provided on the right side of the approach roadway equal to the length of the splitter island from the inscribed circle diameter.

(14) Access Control.

The access control standards in Index 504.3(3) and 504.8 apply to roundabouts at interchange ramp intersections. The dimensions shown in Index 504.8 are to be measured from the inscribed circle diameter.

Driveways should not be placed within 100 feet from the inscribed circle diameter.

(15) Lighting.

Lighting is required at all roundabouts. See NCHRP Report 672 Chapter 8, the Traffic Manual Chapter 9 as well as consult with the District Traffic Safety Engineer.

(16) Landscaping.

Landscaping should be designed such that drivers and bicyclists can observe the signing and shape of the roundabout as they approach, allowing adequate visibility for making decisions within the roundabout. The landscaping of the central island can enhance the intersection by making it a focal point, by promoting lower speeds and by breaking the headlight glare of oncoming vehicles or bicycles. It is desirable to create a domed or mounded central island, between 3.5 to 6 feet high, to increase the visibility of the intersection on the approach. Contact the District Landscape Architecture Unit to provide technical assistance in designing the roundabout landscaping.

(17) Vertical Clearance.

The vertical clearance guidance provided in Index 309.2 applies to roundabouts.

(18) Drainage Design.

See Chapter 800 to 890 for further guidance.

(19) Maintenance.

Contact the District Maintenance Engineer and appropriate Regional Manager for maintenance strategies and practices including seasonal operations, maintenance resources, and specialized equipment. Maintenance responsibilities may also include multiple state, county, and city agencies where coordination of maintenance efforts and funding is needed.

Consider maintenance of the central island. Provide a maintenance vehicle pullout within the central island beyond the truck apron, so maintenance vehicles will not conflict with circulating trucks.

(20) Snow Areas.

In climate regions where snowfall requires the use of snow removal equipment, consider the equipment to be used. Design ICD's as well as entrance and exit geometry to accommodate snow removal equipment and plow limitations. Check with District Maintenance for their requirements and limitations. Geometric elements to consider that facilitate snow removal are; mountable curb, tapering the ends of curbs down to allow plows to ride over curbs, plowing accommodation in both directions, providing snow storage space within the central island, and providing minimum entry/exit widths to accommodate the plow blade. Mountable curb may be used if sidewalk/shared use path is not contiguous to the curb. Provide a planter or textured pavement between the path and the roadway. Snow storage areas must be designed to prevent snow melt from entering the circulating lanes where it can freeze. Snow storage areas must not block pedestrian paths.

(21) Utilities.

Utility access openings (manholes) should not be located within the traveled way within the boundary of the roundabout. Roundabouts do not have shoulders to accommodate traffic while manholes are accessed. Manholes should not be allowed within the circulating roadway to avoid closing down the intersection during access. If a manhole is absolutely necessary within the boundary of the inscribed diameter, place it in the central island and off of the truck apron. Provide a maintenance vehicle pullout to allow access to the manhole without blocking truck traffic.

Topic 406 - Ramp Intersection Capacity Analysis

The following procedure for ramp intersection analysis may be used to estimate the capacity of any signalized intersection where the phasing is relatively simple. It is useful in analyzing the need for additional turning and through traffic lanes. For a more complete analysis refer to the Highway Capacity Manual.

(a) Ramp Intersection Analysis--For the typical local street interchange there is usually a critical intersection of a ramp and the crossroads that establishes the capacity of the interchange. The capacity of a point where lanes of traffic intersect is 1500 vehicles per hour. This is expressed as intersecting lane vehicles per hour (ILV/hr). Table 406 gives values of ILV/hr for various traffic flow conditions.

If a single-lane approach at a normal intersection has a demand volume of 1000 vph, for example, then the intersecting single-lane approach volume cannot exceed 500 vph without delay.

The three examples that follow illustrate the simplicity of analyzing ramp intersections using this 1500 ILV/hr concept.

(b) Diamond Interchange--The critical intersection of a diamond type interchange must accommodate demands of three conflicting travel paths. As traffic volumes approach capacity, signalization will be needed. For the spread diamond (Figure 406A), basic capacity analysis is made on the assumption that 3-phase signalization is employed. For the tight diamond (Figure 406B), it is assumed that 4-phase signal timing is used.

(c) 2 Quadrant Cloverleaf--Because this interchange design (Figure 406C) permits 2-phase signalization, it will have higher capacities on the approach roadways. The critical intersection is shared two ways instead of three ways as in the diamond case.

Table 406

Vehicle Traffic Flow Conditions at Intersections at Various Levels of Operation

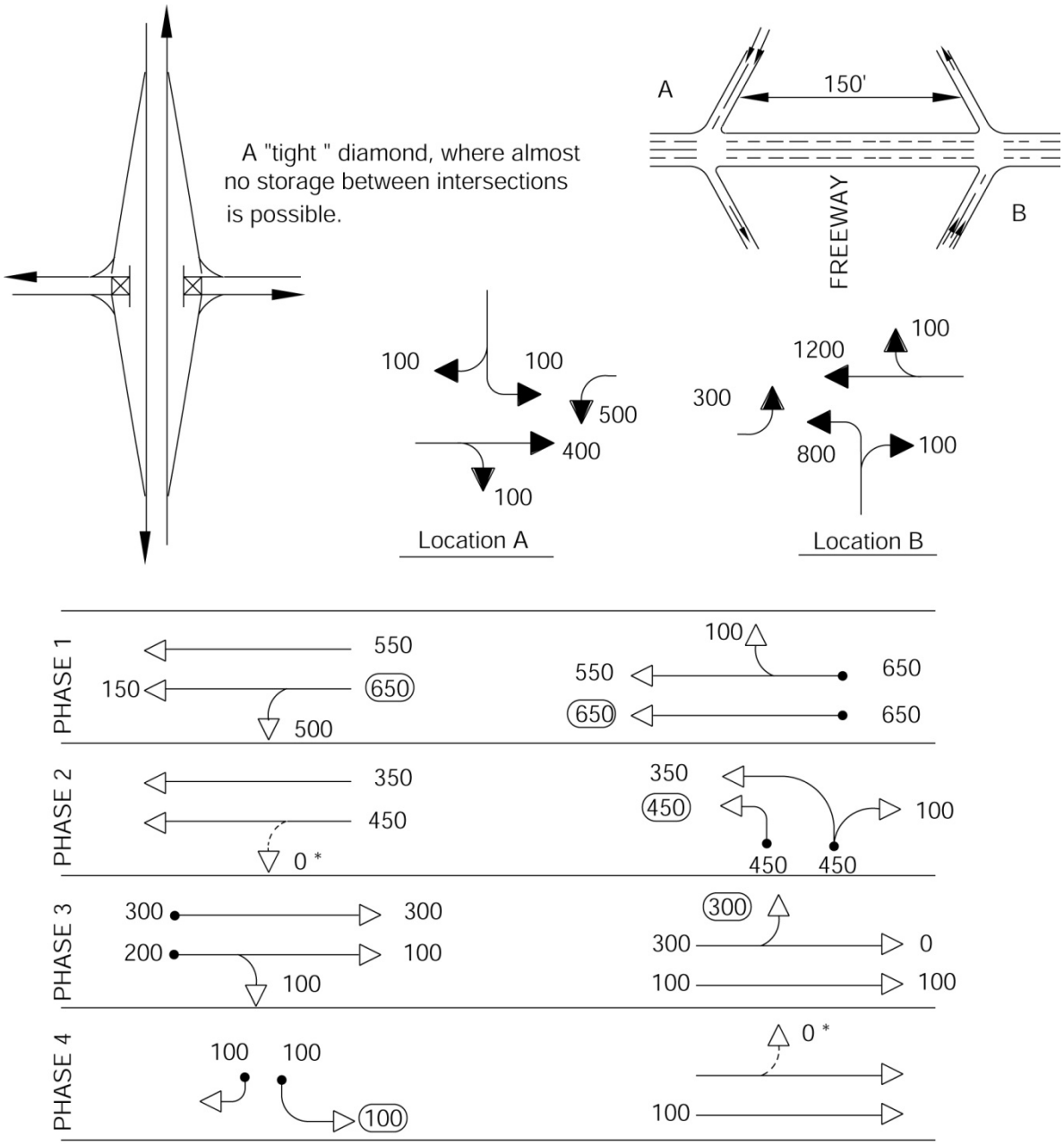
ILV/hr	Description
< 1200:	Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free midblock operations.
1200-1500:	Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.
1500 (Capacity):	Stop-and-go operation with severe delay and heavy congestion(1). Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

NOTE:

(1) The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr, and the excess will be delayed in a queue.

Figure 406A
Spread Diamond

Figure 406B
Tight Diamond



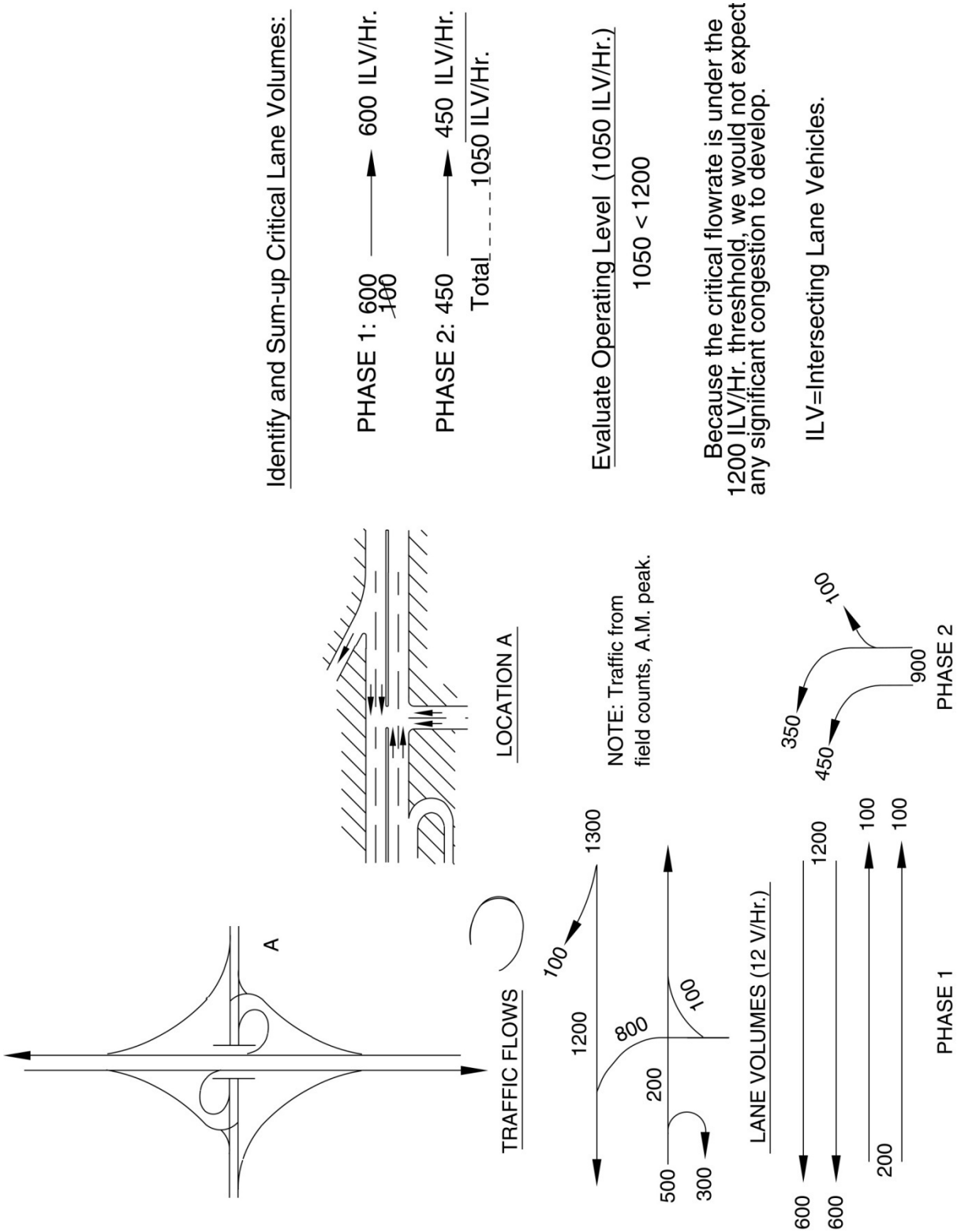
*NOTE: When no storage at all is permitted, left-turn movement is cleared during this phase.

Critical Lane Volumes:

650
450
300
100
1500 ILV/Hr.

ILV=Intersecting Lane Vehicles.

Figure 406C
Two-quadrant Cloverleaf

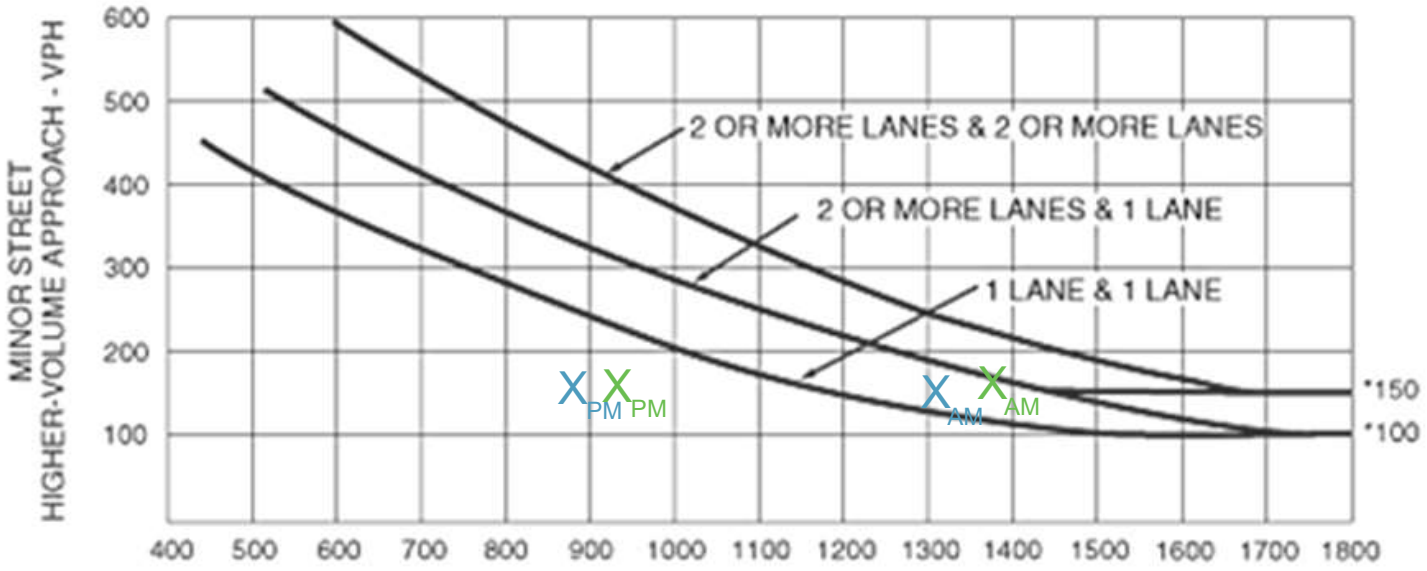


APPENDIX E

Peak Hour Traffic Signal Warrant Worksheets

Avenue 419 / Road 128

Figure 4C-3. Warrant 3, Peak Hour



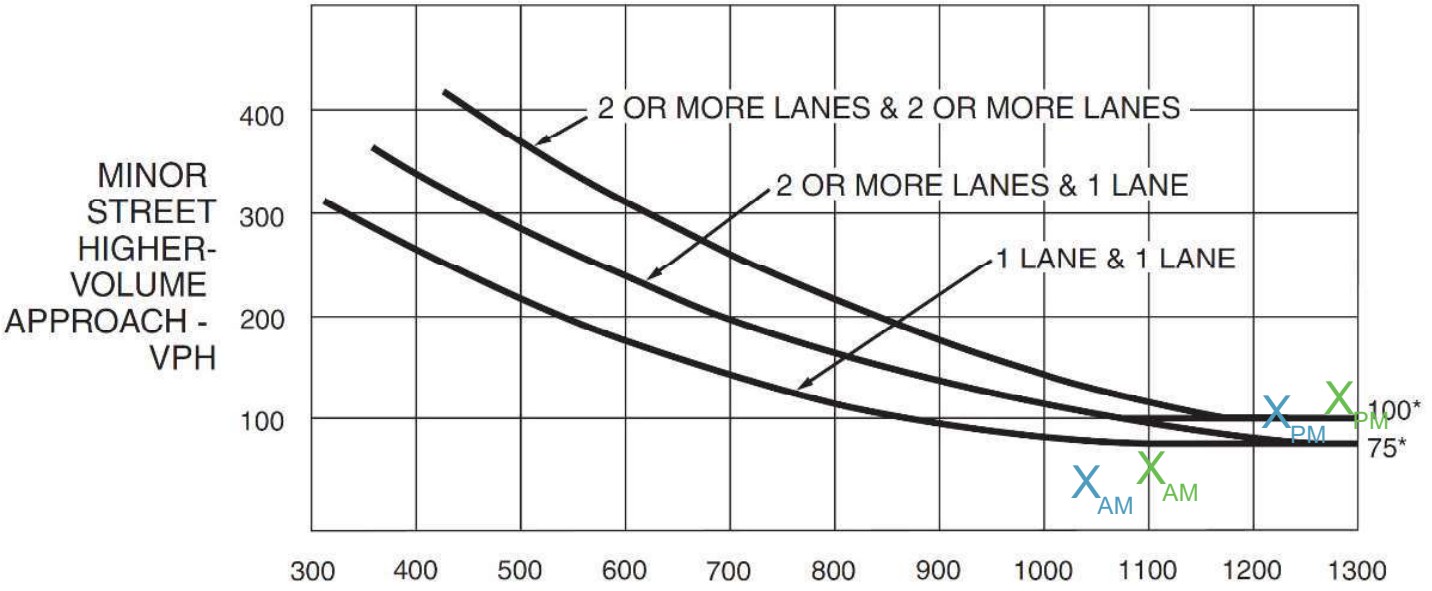
*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
X_{AM} X_{PM} Cumulative Year 2040 No Build
X_{AM} X_{PM} Cumulative Year 2040 Plus Build

Avenue 400 / Road 128

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
X_{AM} X_{PM} Cumulative Year 2040 No Build
X_{AM} X_{PM} Cumulative Year 2040 Plus Build

Appendix “G”

Draft Cutler-Orosi Community Plan Update

DRAFT CUTLER-OROSI COMMUNITY PLAN 2021 UPDATE

Tulare County Resource Management Agency
Economic Development and Planning Branch

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Cutler-Orosi Community Plan 2021 Update

Adopted: ----

Tulare County Board of Supervisors
Resolution No. ----

Tulare County Planning Commission
Recommendations:
Resolutions No.

Cutler-Orosi Community Plan Update: GPA 18-003
Section 18.9 Zoning Ordinance (Mixed Use): PZC 18-009
Section 16 Zoning Ordinance (By Right) PZC 18-010
Zoning District Map: PZC 18-011

Tulare County Resource Management Agency
Economic Development and Planning Branch
5961 S Mooney Boulevard
Visalia, CA 93277-9394
(559) 624-7000

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Draft Cutler-Orosi Community Plan 2021 Update

Tulare County Board of Supervisors

Larry Macari – District 1
Pete Vander Poel – District 2
Amy Shuklian – District 3 (Chair)
Eddie Valero – District 4 (Vice Chair)
Dennis Townsend – District 5

Tulare County Planning Commission

John F. Elliott – District 1
Gil Aguilar – District 2
Bill Whitlatch – District 3
Maria McElroy – District 4 (Chair)
Steve Pearson – District 5 (Vice Chair)
Wayne O. Millies – At Large
Ed Dias – At Large

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Draft Cutler-Orosi Community Plan 2021 Update

County Administrative Office

Jason T. Britt, CAO

Tulare County Resource Management Agency

Reed Schenke, P.E., Director
Michael Washam, Associate Director
Aaron Bock, Assistant Director
Dave Bryant, Chief Planner, Special Projects (retired)
Hector Guerra, Chief Environmental Planner
Jessica Willis, Planner IV
Chuck Przybylski, Planner IV
Susan Simon, Planner III
Jose Saenz, Planner III
Roxana Bran, Planning Tech II
Johnson Vang, Engineer III
Roxana Mendez, Engineer I
Juan Carmona, Property Specialist II
Doreen Alvez, Administrative Aide
Hector Ramos, Building and Housing Manager
Kevin Sullivan, Building and Zoning Inspector IV

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Draft Cutler-Orosi Community Plan 2021 Update

Table of Contents

Draft Cutler-Orosi Community Plan 2021 Update

Draft Cutler-Orosi Community Plan 2021 Update

Draft Cutler-Orosi Community Plan 2021 Update

Figures

Tables

Attachments

Appendices

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Executive Summary

Introduction

The Cutler-Orosi Community Plan was adopted by the Tulare County Board of Supervisors (BOS) on August 30, 1988 (by Resolution No. 88-1051). Subsequent to the adoption of the Community Plan a series of General Plan Amendments were adopted as follows: GPA 89-03 adopted by the BOS on November 6, 1990 by Resolution 90-1346; GPA 94-004, GPA 94-005, and GPA 95-001 on November 7, 1995 by Resolution No. 95-1272; GPA 95-005 and GPA 95-006 were adopted by the BOS on April 23, 1996 by Resolution No. 96-0335; GPA 98-004 adopted by the BOS on July 13, 1999 by Resolution No. 99-0480; GPA 00-001 adopted by the BOS on October 10, 2000 by Resolution No. 2000-771; GPA 00-005 adopted by BOS on August 27, 2002 by Resolution No. 2002-0652; and GPA 09-003 adopted by BOS on October 14, 2014 by Resolution No. 2014-0717. The 1988 Cutler-Orosi Community Plan is a collection of goals, objectives, and policies for the physical development of the community. The primary purpose of the plan was to outline community goals regarding physical development and to promote the general welfare of the communities. The plan serves as a general guide for both public and private decisions affecting the community, and provides for the overall direction, density, and type of growth consistent with the needs of the communities.

General Plan Amendments

The proposed Cutler-Orosi Community Plan 2021 Update is consistent with the Tulare County General Plan 2030 Update (2012) and will include the following primary goals and objectives:

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional SR 63 Corridor in order to implement the following General Plan goals:

- Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters, such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
- Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
- Reduce development pressure on agriculturally designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
- Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
- Help to improve the circulation and transit transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be improved for the following reasons:

   - With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
   - Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the General Plan 2030 Update (August 2012) and the recently adopted Housing Element 2015 Update (November 2015); and • With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs, such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

   By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

   The proposed Cutler-Orosi Community Plan 2021 Update amends the 1988 Cutler-Orosi Community Plan with this proposed General Plan Amendment and implements the 2012 Tulare County General Plan 2030 Update:

   Planning Framework Element (Urban Boundaries). The Planning Framework Element is revised to update the Urban Development Boundary Part 1, of the Tulare County General Plan. The intent is that the County's UDB is coterminous, as administratively feasible, with the Sphere of Influence (SOI) adopted by Tulare County Local Agency Formation Commission.

   Open Space Element. The Environmental Resources Management Element is amended to revise the "Urban Expansion Area" designation on the Open Space Map Part 1, Figure 8-1 of the Tulare County General Plan to reflect the area within the revised Urban Development Boundary of Cutler-Orosi.

   Land Use, Transportation and Circulation Elements Part 1. This Plan Amendment incorporates the following: The County's General Plan land use designations, circulation functional classification, and development policies into the Cutler-Orosi Community Plan 2021 Update.

   Community Plan Updates Part III. The proposed Community Plan for Cutler-Orosi is updated with this proposed amendment.

Zone Ordinance Amendments

Section 18.9: "MU" Mixed-Use Combining Zone. This amendment will establish the Mixed-Use Combining Zone(s) within the UDB of Cutler-Orosi. Currently, this overlay zone applies to 34 communities including Ivanhoe, Plainview, Woodville, Poplar/Cotton Center, Three Rivers, Goshen, Ducor, Terra Bella, Traver, Strathmore, Pixley, Tipton, Earlimart, Alpaugh, East Orosi, London, Richgrove, Sultana, El Monte Mobile Village, Hypericum, Jovista, Matheny Tract, Tooleville, Allensworth, Delft Colony, East Tulare Villa, Lindcove, Monson, Seville, Teviston, Tonyville, Waukena, West Goshen, and Yettem. The purpose of this zone is to allow for mixed uses. Allowing a mix of uses promotes flexibility in the types of entitlements that can be issued. Economic Development can be pursued with a wide variety of development potential. In addition, mixed use can allow for decreased vehicle miles traveled if residential uses are mixed with uses for employment.

Section 16 H: Additional "By-Right" Uses. This amendment will establish additional by-right uses within the UDB of Cutler-Orosi. The allowance of additional by-right uses applies to 34 communities including Lemon Cove, Ivanhoe, Plainview, Woodville, Poplar/Cotton Center, Three Rivers, Goshen, Ducor, Terra Bella, Traver, Strathmore, Pixley, Tipton, Earlimart, Alpaugh, East Orosi, London, Richgrove, Sultana, El Monte Mobile Village, Hypericum, Jovista, Matheny Tract, Tooleville, Allensworth, Delft Colony, East Tulare Villa, Lindcove, Monson, Seville, Teviston, Tonyville, Waukena, West Goshen, and Yettem. The purpose of adding additional by-right uses is to promote sustainability; economic development and prosperity by providing design flexibility, streamline the approval process and reduce vehicles miles traveled by locating residential uses within proximity to employment areas.

Ordinance No. 352: Zoning District Ordinance Map. This amendment to the Zoning District Ordinance Map will rezone properties within the Cutler-Orosi UDB to be consistent with the 2020 Cutler-Orosi Community Plan.

Community Plan Context

The two communities are predominantly rural, agriculturally related service centers. They not only serve as an area where agriculturally oriented enterprises, such as packing houses and cold storage facilities are located, but also as a residential community where many of the areas farm workers reside. Persons residing in smaller surrounding communities, like East Orosi, Sultana, and Yettem, travel to Cutler-Orosi for incidental shopping, school, and banking purposes. For major shopping, leisure services and medical care, persons will generally travel to Dinuba (approximately five miles west), or Visalia (approximately 15 miles south).

The objective in the preparation of the Cutler-Orosi Community Plan 2021 Update is to develop a plan, which can accurately reflect the needs and priorities of the unincorporated communities of Cutler-Orosi. In addition, the County has prepared an Environmental Impact Report to address environmental-related issues. The Environmental Impact Report (EIR) is significant as it can be used to assist in fostering future economic development, grants, and economic development opportunities, by providing environmental clearance when tiering off the General Plan's and Community Plan's EIR's.

Cutler-Orosi are currently designated as Unincorporated Communities in the 2030 Tulare County General Plan (2012). Cutler-Orosi is situated about one-half mile apart along State Route 63, a rural highway running north/south through eastern Tulare County. It has become apparent that a more precise plan is needed to increase the availability of infrastructure funding and to stimulate economic development within the community.

As with any community plan, the contents of this document are not intended to be absolute. Planning is a continuous process and, to be effective, requires periodic re-evaluation and revision to reflect changing needs and priorities. This Plan, therefore, should be reviewed on a periodic basis with the assistance and participation of local citizens, groups, and agencies. By doing so, it is envisioned that the Cutler-Orosi Community Plan will continue to provide meaningful and necessary guidance toward the development of the community in the foreseeable future.

California Government Code (Section 65300 et seq.) requires that each local agency, city or county, prepare and adopt comprehensive long-term general plans for the physical development of lands within its jurisdiction. A general plan must function as "a statement of development policies" and must include a diagram and text setting forth goals, policies, standards, and plan proposals. The plan must, on the minimum, include the following elements: land use, circulation, housing, conservation, noise, safety, and open space. State law also provides that a local agency may include one or more several optional elements depending on the needs and characteristics of the jurisdiction.

In Tulare County, the General Plan has historically been developed on a countywide basis or by large geographic sub-areas (such as rural valley, foothill, and mountain), with development policies, emphasizing county-wide and area-wide issues and concerns. In establishing land use planning policies on an area-wide basis, it has been recognized that several unincorporated communities, including Cutler-Orosi, have localized land use needs and issues that should be addressed in a more specific manner particular to its community, geographic features, location of major roadways (such as State Route 63), population characteristics, availability of water, and other issues unique to the community's area. Therefore, the Cutler-Orosi Community Plan 2021 Update has been prepared with an emphasis on these considerations with particular focus on land use and circulation.

Location

Cutler-Orosi are located in California's central San Joaquin Valley, in the easterly Valley floor portion of Tulare County **(see Figure 1)**. The two adjacent communities lie in the midst of one of the most productive agricultural regions in the world, and are virtually surrounded by field crops, orchards, and vineyards.

Cutler-Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the County seat. Both communities are located along State Route (SR) 63 about one-half mile apart. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler. The communities are situated at the base of the Sierra Nevada Mountain foothills.

Cutler is generally bound by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses approximately 0.8 square miles of land **(see Figure 2)**. Cutler is located south of and adjacent to the unincorporated community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bound by Avenue 408 in the south, Avenue 424 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses approximately 2.4 square miles of land. State Route (SR) 63 directly serves Orosi. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes. The unincorporated community of East Orosi is located to the northeast.

Cutler-Orosi are located in Sections 07, 08, 17, 18, 19, & 20, Township 16 South, Range 25 East; MDB&M, and can be found within the Orange Cove South Quadrant, United States Geological Survey 7.5 minute topographic quadrangle. Comparatively flat and topographically almost featureless, Cutler-Orosi lies at an elevation ranging from 375 feet above mean sea level (msl), near the northeasterly end of Orosi, to 355 feet msl at the west end of Cutler. The community is situated on a very gentle gradient to the southwest. The coordinates of Cutler-Orosi are Latitude: 36° 31' 29N" and Longitude: 119° 17' 20".

Figure 1 - Vicinity Map

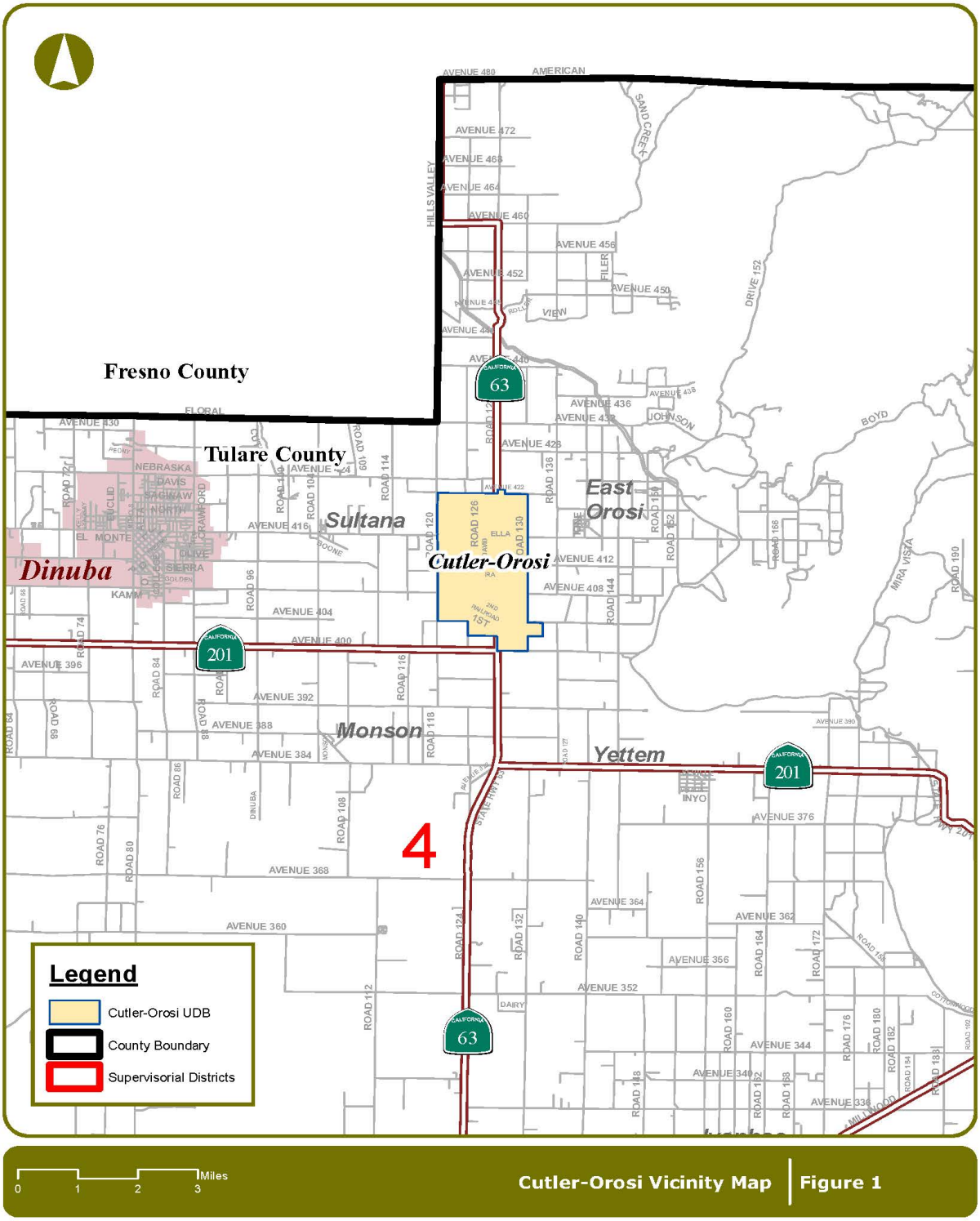
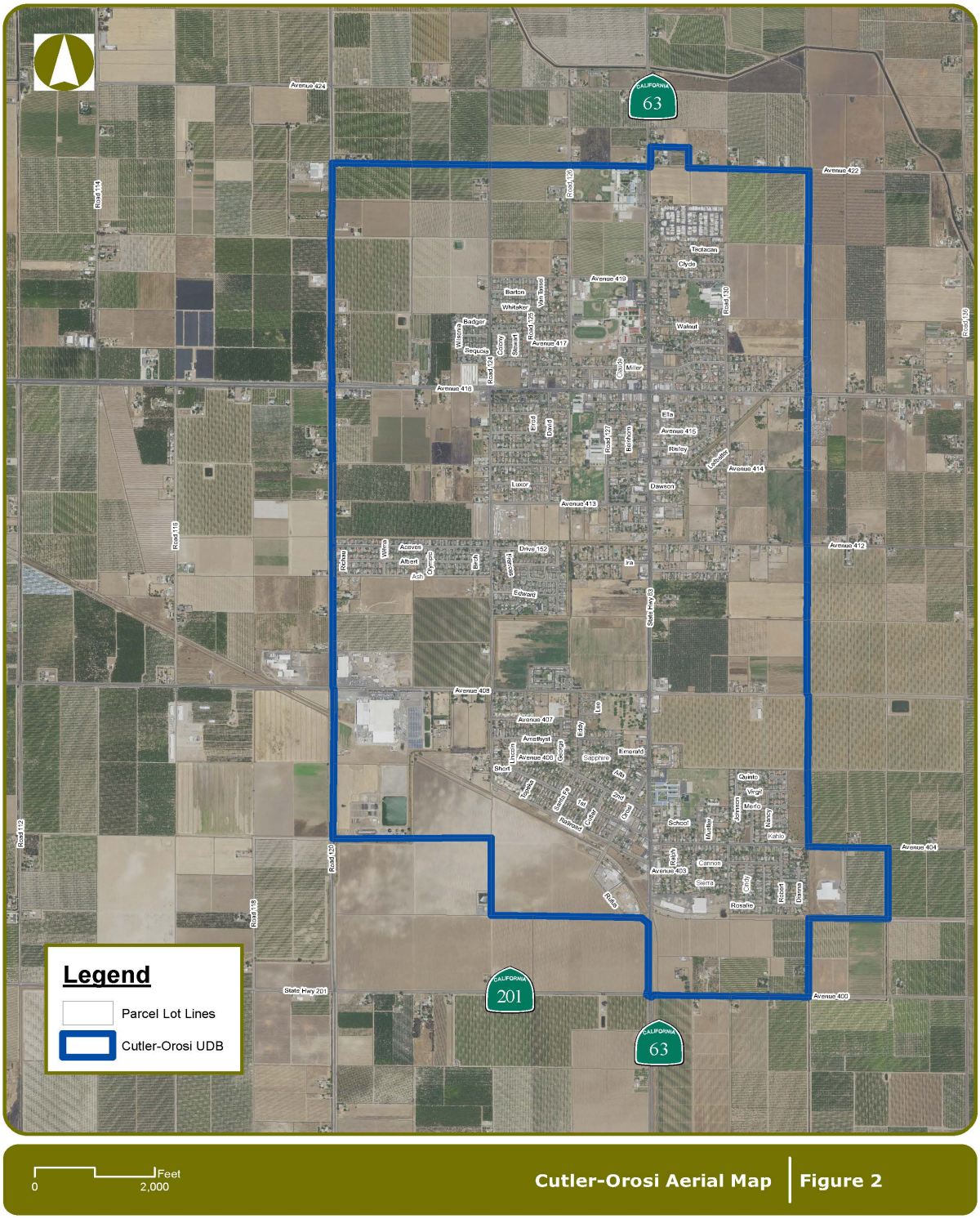


Figure 2 - Aerial Map



Historical Perspective

"Generally, the growth of the two communities has been well planned. Both have developed in a contiguous fashion and have remained compact through infilling. The two communities are separated from each other by distances ranging from one quarter to one half mile. One of the reasons for the open space between the two communities is that Sand Creek was previously subject to periodical floods thereby making some of this land undevelopable prior to current flood control improvements. Most of the land that separates Cutler-Orosi is presently used for agriculture.

Cutler-Orosi are surrounded by agricultural lands. Crops grown on these lands include field crops, deciduous fruit orchards and vineyards. Unlike many Valley communities, there is little rural residential development (1 to 5 acre homesites) surrounding either community.

Cutler is bisected north and south by SR 63. It was bound on the south by the Atchison Topeka Santa Fe Railroad and agricultural land, on the north and east by agricultural land, and on the west by the railroad, the wastewater treatment plant and two major packinghouses. The western half of Cutler is almost fully developed, whereas the eastern half is less than 50 percent urbanized. The Atchison Topeka Santa Fe Railroad tracks that bound Cutler to the south is now abandoned right-of-way **(see Figure 3)**.[1] The railroad tracks and crossties were removed. The cobble and gravel covered railbed and footprint of the former railway are still visible.

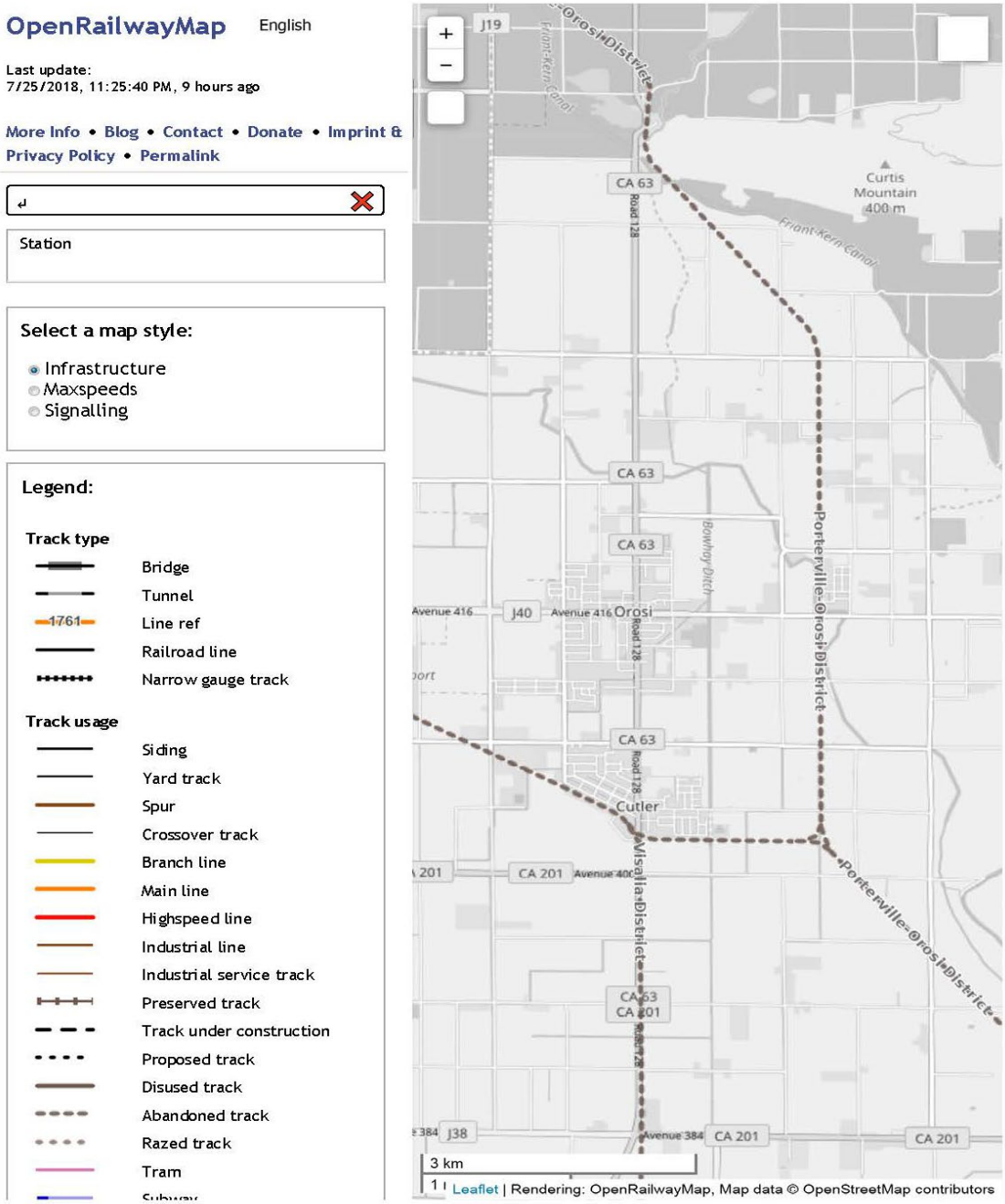
Residential development has occurred on the east side of Cutler. Development to the south and southeast has been restricted by a number of features, including the railbed footprint, the wastewater treatment plant, industry, and lands under the Williamson Act. To the north, Development northward has historically been restricted by flooding from Sand Creek prior to existing flood control improvements. Commercial development is concentrated along both sides of SR 63, while industrial uses are situated along the railbed footprint. Cutler Elementary School and two parks are also located adjacent to SR 63.

State Route 63 and Avenue 416 divide Orosi into four neighborhood quadrants. Each quadrant supports a mix of single family, mobile home and rural residential development. Almost all the multifamily development is located in the southwest quadrant, except the southeast, support a school. Residential development has occurred in the northeast and southwest quadrants. Development to the south and east has historically been restricted by flooding and irregularly shaped parcels, which are difficult to develop.

Orosi's commercial district is concentrated along SR 63 and along the west side of Avenue 416. New Commercial development has not occurred in Orosi in recent years. The proximity of Dinuba and Visalia make commercial development in Orosi somewhat risky due to competition from these neighboring communities. Orosi has little industrial development, and what little there is dispersed in the southern part of the community."[2]

[1] Open Railway Map https//www.openrailwaymap.org.
[2] Cutler-Orosi Community Plan, adopted August 30, 1988 by Tulare County Board of Supervisors, Resolution No. 88-1051.

Figure 3 - Abandoned Railroad Track



Cutler-Orosi Charrette, November 2001

"The Cutler-Orosi Community Design Charrette was conducted from November 1 – 5, 2001. Its goal was to create a conceptual plan for improvements for all roadway users along State Route 63 and the intersecting main streets of Cutler-Orosi. It was funded through a Caltrans Community-

Based Transportation Planning Grant, and grew out of community visioning work initiated through a Great Valley Center Legacy grant. The design team included two transportation planners, a traffic engineer, a landscape architect, and an architect. All events were conducted in both English and Spanish.

Community participation during the charrette was exceptional. Over 130 people attended the opening event, and approximately 300 people, including County and Caltrans District 6 staff took part during the five-day event. A multi-phased plan with several low-cost implementation steps to improve safety and help stimulate investment in Cutler-Orosi was developed.

Recommendations that were recommended included a series of community-based actions that identified little cost but anticipated delivering a high impact. Recommendations that will require more time include interim safety and beautification measures such as sidewalk completion, curb extensions at critical crossings, the narrowing of State Route 63 north of Avenue 416, and street tree plantings.

In the longer term vision, commuter traffic to and from Dinuba and heavy trucks were recommended to be rerouted off SR 63 through the construction of a truck bypass on County Road 120. By moving a significant portion of through traffic off SR 63, it allows for significant enhancements and traffic calming which are appropriate for a pedestrian-friendly town center that the community envisions on the vacant land between the two towns. A median, on street parking, bicycle lanes, and the removal of two traffic lanes were recommended for nearly the entire corridor in this later phase.

This report is one of three undertaken by the County for the previously established Cutler-Orosi Redevelopment Project Area. Along with the concurrent water and sewer needs assessment study, the charrette report included recommendations of the Cutler-Orosi Commercial Development Plan."[3]

[3] Cutler-Orosi Charrette Report, November 2001, by Walkable Communities, Inc. and the Local Government Commission prepared for County of Tulare Redevelopment Agency and Local Government Commission. Page 5.

Cutler-Orosi Background Report

Community Profile

Planning Area

Cutler-Orosi are two unincorporated communities located in northern Tulare County. Both communities are located along State Route 63 about one half mile apart. The population for Cutler-Orosi is 5,850 and 7,760 persons in 2017. Cutler-Orosi are surrounded by agricultural lands. The Cutler-Orosi Urban Development Boundary (UDB) area consists of approximately 2,441.9 acres **(see Figure 4)**. Cutler is bisected north and south by State Route (SR) 63. SR 63 and Avenue 416 divides Orosi into four neighborhood quadrants.

Disadvantaged Community

Public Resources Code 75005. (g) states that a "[d]isadvantaged community" means a community with a median household income less than 80% of the statewide average. "Severely disadvantaged community" means a community with a median household income less than 60% of the statewide average."

In 2017, Cutler's median household income was $31,939 and Orosi's median household income was $35,798, whereas the State of California's median household income was $67,169. Median household income for Cutler was 47.5% and Orosi median household income was 53.3% of the State of California's median household income, and therefore considered severely disadvantaged communities.

Climate

The southern San Joaquin Valley climate is influenced to a great extent by the Coast Ranges to the west which prevent the cool, moisture-laden maritime air from reaching the valley. It is generally characterized as a Mediterranean climate (one of three similar zones in the world). The area in general has a climate that tends to be clear, sunny, warm and dry. The mean temperatures range from a low of 34° F. (l.l° C) in January to a high of 100° F. (37.7° C) in July. Because of the Coast Ranges, the average rainfall for the area is very low, ranging from three to nine inches per year, with 90% of the yearly precipitation between November and April. There are periods in winter when the valley floor is covered with dense wet ground fogs with winds typically light and from the north.

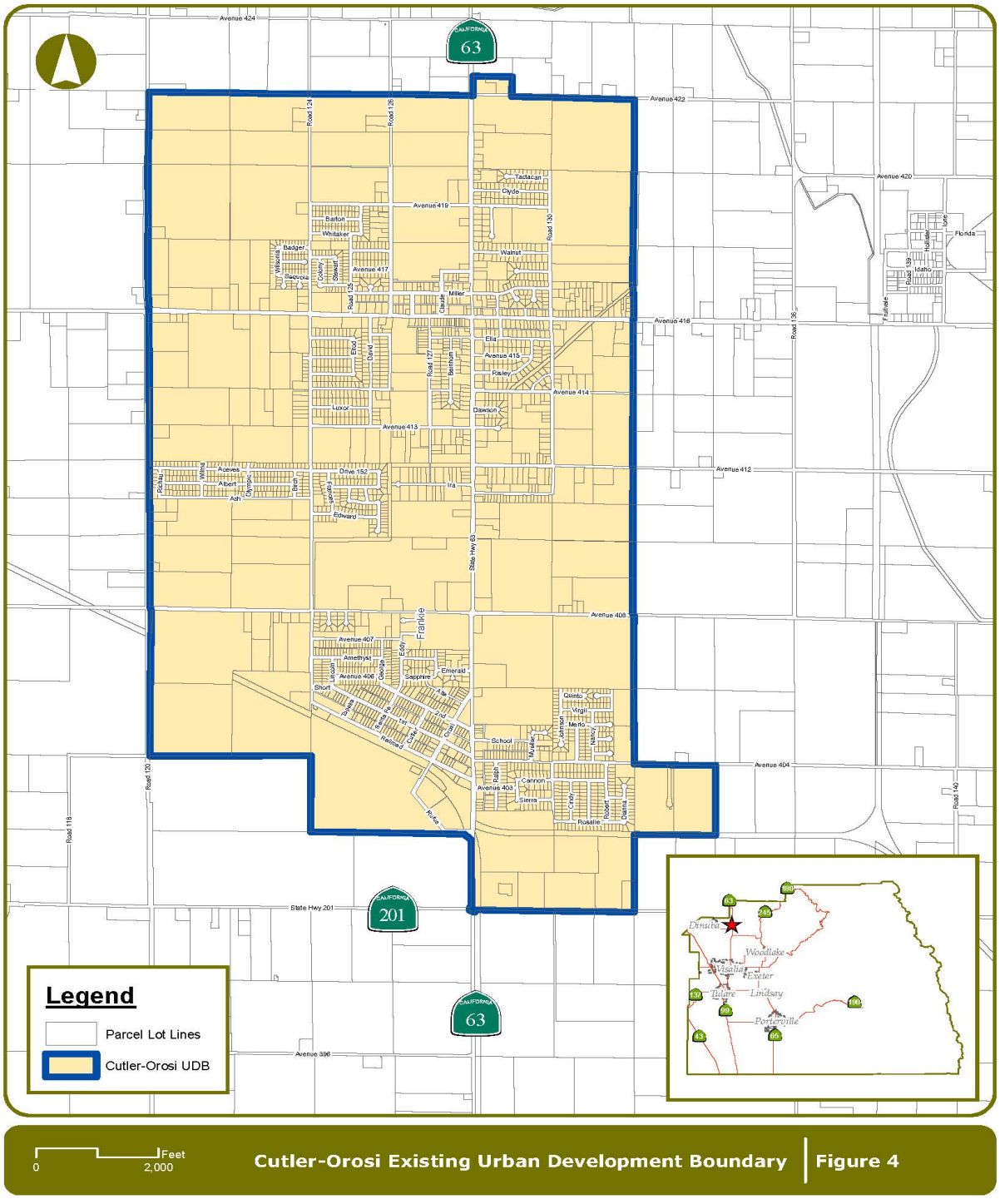
Topography

The communities are situated on relatively level terrain with a slight fall towards the southwest. The major natural features in the area include the Sierran foothills located two miles to the east, and Sand Creek, which flows between the two communities. Average elevation above sea level for Cutler is 374 and 361 feet for Orosi.

Existing Urban Development Boundary

The existing Cutler-Orosi Urban Development Boundary (UDB) area **(see Figure 4)** consists of approximately 2,441.9-acres (including rights-of-way). Within the existing Cutler-Orosi UDB, approximately 1,245.4-acres are currently zoned for urban uses and approximately 956.9 acres are zoned for agricultural uses. Cutler-Orosi are surrounded by agricultural lands, crops grown on these lands include field crops, deciduous fruit orchards, and vineyards. Unlike many Valley communities, there is little rural residential development (1 to 5 acre homesites) surrounding either community. The UDB includes areas within the Cutler Public Utility District (CPUD) and the Orosi Public Utility District (OPUD) in order to provide service area consistency between these two boundaries.

Figure 4 - Cutler-Orosi Existing Urban Development Boundary



Existing Land Use Plan

Land use patterns in Cutler-Orosi are typical of other Valley communities. Commercial development and apartments are situated on the more heavily traveled streets, industrial development is located along railroads, schools, and parks are integrated with residential districts, and the entire community is surrounded by agriculture.

The purpose of the Cutler-Orosi Community Plan is to establish land use policies to guide existing and future development to the year 2030. The general intent of these policies is to protect the health, safety, and welfare of persons living in Cutler-Orosi. In more specific terms, the policies serve to identify the most appropriate locations and arrangement of different types of land uses based upon environmental, circulation, infrastructure/services, and planning concerns.

The County of Tulare, through existing policies, has encouraged both incorporated and unincorporated communities to establish urban development and land use patterns, which are compact and contiguous. This policy position has reduced "leap frog" (that is, dis-contiguous) development within the County, thereby helping preserve agricultural lands, and minimizing land use conflicts between urban and agricultural areas.

Residential

To provide for a variety of living environments and opportunities for affordable housing, the 1988 Cutler-Orosi Community Plan establishes three residential densities: low, medium, and high. Low density residential allows six units or less per acre; medium density allows 4 to 14 units per acre and high density allows 15 to 29 units per acre.

Low Density Residential The Low Density areas are planned to accommodate single-family homes on individual lots where urban services (i.e. community water and sewer) are provided. Properties designated low density residential generally lack adequate infrastructure to warrant higher densities, or serve as a transitional use between urban and agricultural uses. This residential designation promotes a rural environment where livestock and small farming operations are allowed.

Medium Density Residential Medium Density Residential areas are planned to accommodate single-family homes on individual lots where urban services (i.e. community water and sewer) are provided, at higher densities than the area designated for Low Density Residential Development. Medium Density Residential is applied to many areas of the residential land in Cutler-Orosi. Properties with this designation are, or will become, the single-family neighborhoods of each community. This designation is generally applied to properties that are free of excessive noise and through traffic, are in close proximity to parks and schools, are provided with off-site sewer and water, and are within the immediate service area of fire and police services.

High Density Residential High Density Residential designation provides for residential development with a wide range of densities and housing types. High density residential is the designation reserved for multiple family units or apartments. This Plan has attempted to

insure that no one quadrant of either community is overburdened with apartments. In addition, multiple family development presents many more design options that can be used to help mitigate noise situations. Therefore, this Plan recommends that most of the high-density residential development be located along arterial or collector streets, which can handle greater amounts of traffic and where noise levels are usually greater than most single-family subdivisions can tolerate.

In addition, this designation has also been applied to areas of Orosi, which contain irregular parcels in terms of size and shape. It is the strategy of this Plan that a higher level of land use many encourage property owners to privately redevelop their land. This redevelopment could lead to removal of dilapidated residential units, a better utilization of the land for residential development, and reduce the residential demands for outlying agricultural properties, thereby preserving agricultural land.

Residential Reserve

Land designated for future residential use, should remain in accordance with Policy 5.1. It should be noted that a general plan amendment is not agricultural use until it is determined that conditions warrant conversion to residential use, needed to develop land in a reserve classification.

General Commercial

Commercial development first appeared near the intersection of SR 63 and Avenue 416, and have since spread in strip fashion along these routes.

Service Commercial

Orosi contains one-area approximately 12 acres of service commercial, located south of Avenue 416. Cutler contains two areas (approximately 68 acres and approximately 11 acres of Service Commercial) along the railbed footprint.

Professional Office

Professional Office contains approximately 16.6 acres. In Orosi, Land Use Designation Professional Office is located along Avenue 416 and SR 63. Family Healthcare Network is located in Cutler on Avenue 408.

Industrial

Currently, industry in the Cutler-Orosi area is concentrated along the railbed. Included in this area are packinghouses, cold storage facilities, a box manufacturing plant, and an agricultural chemical company. Orosi has a five (5) acre parcel south of Avenue 416. Cutler is along the railbed and on east side of SR 63

Industrial Reserve

Land within the Plan Area which is recognized as suitable for industrial uses or agriculturally-related industries and is designated for eventual conversion to commercial use, but which is expected to be

left in exclusive agricultural zoning until it is determined that conditions warrant conversion to industrial use, in accordance with Policy 5.1.

Agriculture

Agriculture is the foundation of Tulare County's economy. For this reason, it is important that agricultural lands be preserved and that agricultural operations remain free of adjacent incompatible land uses, which may hamper the operation. The Cutler-Orosi Community Plan takes into consideration surrounding agricultural operations and their needs to be free of intruding urban uses. Where possible, the UDB follows a road, railroad, or creek so that there is some spatial distance between future urban uses and agriculture.

Park

Ledbetter Park is approximately 11 acres in size and is located one mile northwest of Cutler on Road 124/SR 63.

Adopted Land Use Plan

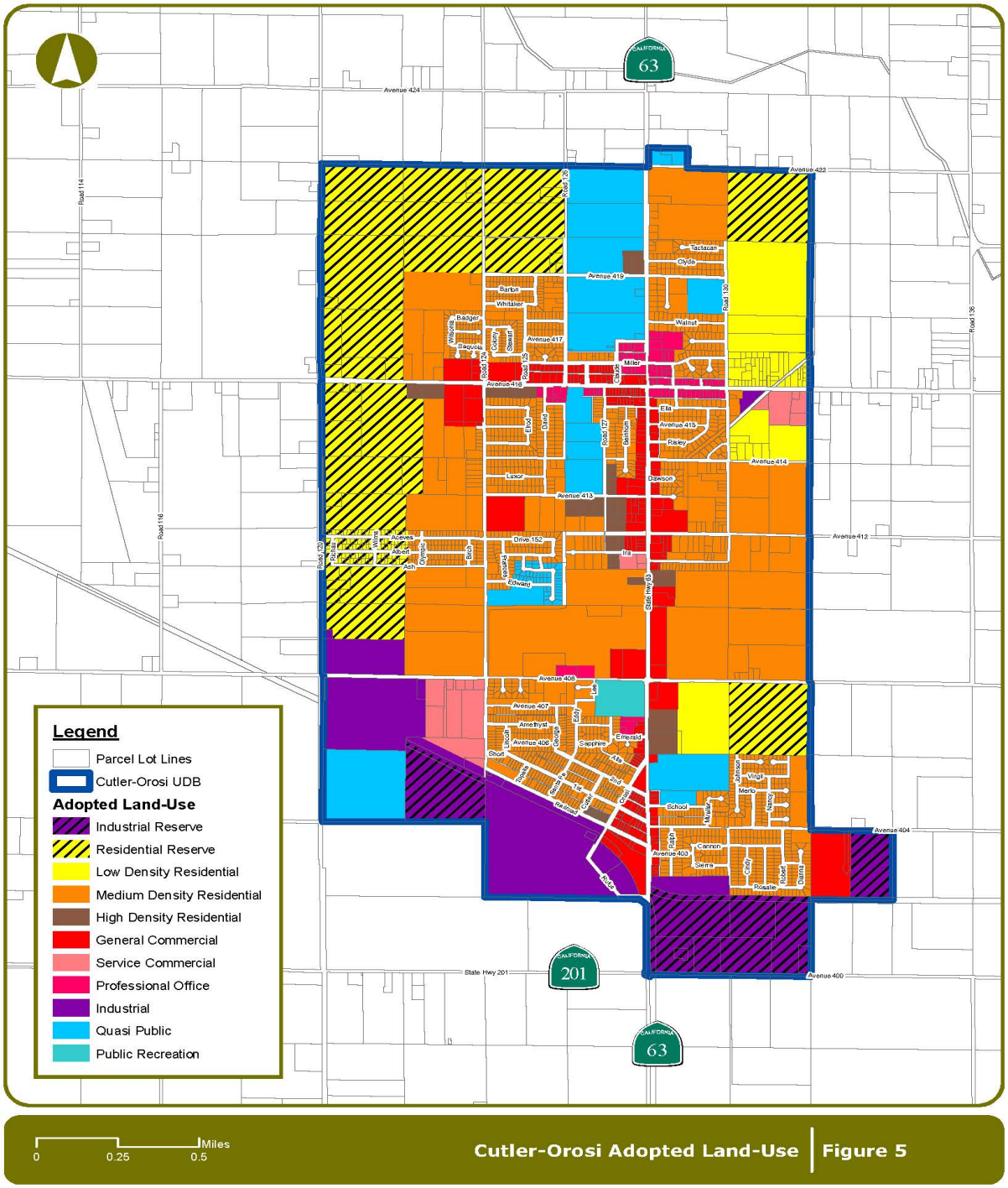
Table 1 shows that a majority of the land in the 1988 adopted Cutler-Orosi Community Plan (As Amended) area is designated Residential (1,014 acres). In total, there is about 2,412.3 acres of designated lands in the Cutler-Orosi Community Planning Area **(see Figure 5)** and approximately 231.3 acres within the plan area is dedicated to rights-of-way.

Table 1 Cutler-Orosi Adopted Land Use Plan 1988

Designation	Total Acreage	Percentage
General Commercial	140.4	5.74
High Density Residential	38.7	1.58
Industrial	168.3	6.89
Industrial Reserve	135.0	5.53
Low Density Residential	125.1	5.12
Medium Density Residential	850.2	34.82
Professional Office	28.6	1.17
Public Recreation	11.9	0.49
Quasi-Public	201.1	8.23
Residential Reserve	459.9	18.83
Service Commercial	42.8	1.75
(blank)	8.3	0.34
Unclassified (Right-of-Way)	231.3	9.47
Total	**2,441.9**	**100**

Source: Tulare County GIS

Figure 5 – Cutler-Orosi Adopted Land Use Plan Map



Existing Zoning Districts

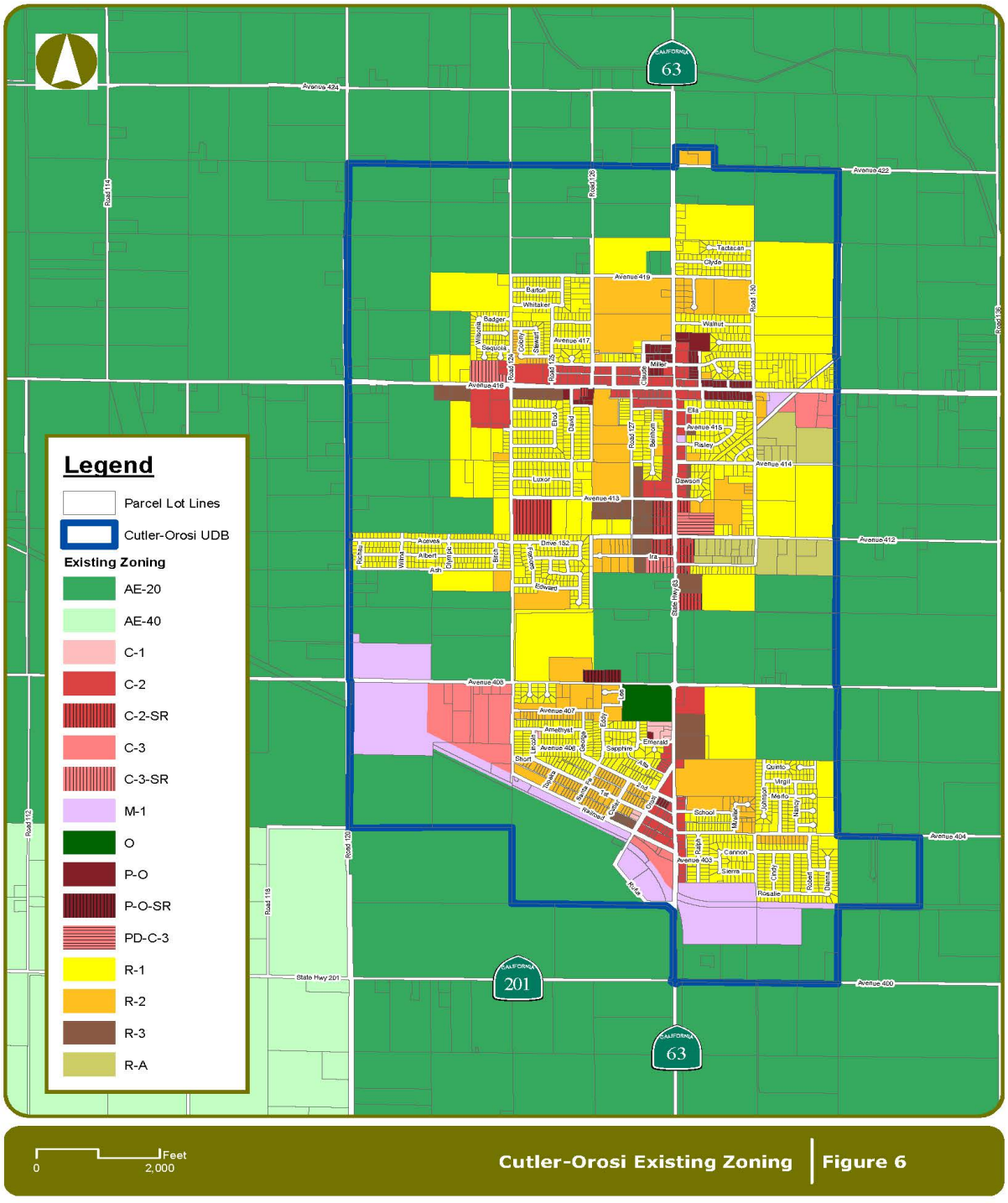
The Zoning designations within the existing 1988 Cutler-Orosi Community Plan Update are shown in **Figure 6**, as demonstrated in **Table 2**.

Table 2 Existing Zoning Districts

Zoning Designations	Existing Acres	Percent
AE-20	956.9	39.1
C-1	3.5	0.1
C-2	69.8	2.8
C-2-SR	23.2	0.9
C-3	55.1	2.2
C-3-SR	7.5	0.3
M-1	130.8	5.3
O	11.9	0.4
PD-C-3	5.4	0.2
P-O	16.6	0.6
P-O-SR	3.1	0.1
R-1	644.3	26.3
R-2	189.1	7.7
R-3	36.3	1.4
R-A	50.3	2.0
Z	6.8	0.2
Unclassified (Right-of-Way)	231.3	9.4
Total	**2,441.9**	**100**

Source: Tulare County GIS

Figure 6 - Cutler-Orosi Existing Zoning Districts



Demographics

Introduction

An important part of planning is having information that describes the characteristics of a Community's population. Collectively, these characteristics are known as "demographics" which is data typically consisting of the age, gender (i.e., male or female), income, race, employment, and other characteristics of a community. This data, and historical trends of this data, allows a reasonable way to project what may occur in the future and thereby provides a guide to which issues need to be addressed in the Community plan. For example, knowing the age and percentage of a population allows proper planning for school needs for school-age children; knowing how many people may eventually live in a Community allows for proper planning to meet housing needs and the amount of land needed to provide housing for a growing population. If a population can be estimated, it is possible to project how much water and/or sewer service may be needed for a Community. The following information provides a summary of some of the more important demographic data needed to craft a plan that can realistically address the needs of a smaller community such as Cutler-Orosi.

Historic Population Growth

The rate of population growth over a 20-year period, 1960 - 1980, in the unincorporated County and Cutler-Orosi grew from 3,239 to 7,225 persons, an average annual growth rate of 6.1 percent.

Recent Population Growth

In 2000, Cutler-Orosi's population was 11,809. The population increased to 13,610 by 2017. The male population increased from 6,371 in 2000 to 7,313 in 2017. The female population increased from 5,438 in 2000 to 6,297 in 2017 **(see Table 3)**.

Table 3 Population (2000 and 2017)

Geography	2000			2017		
	Total Population (2000)	Male (2000)	Female (2000)	Total Population (2017)	Male (2017)	Female (2017)
California	33,871,648	16,874,892	16,996,756	39,982,847	19,366.579	19,616,268
Tulare County	368,021	184,010	184,011	458,809	229,488	229,321
Cutler CDP	4,491	2,508	1,983	5,850	3,291	2,559
Orosi CDP	7,318	3,863	3,455	7,760	4,022	3,738
Cutler Percentage	-	55.8	44.2	-	51.8	48.2
Orosi Percentage	-	52.8	47.2	-	56.3	43.7

Source: California Department of Finance

Projected Population

"The San Joaquin Valley faces major challenges. One concerns how to handle future growth. Population in the Valley is expected to nearly triple by 2050, from 3.6 million to 9.4 million people, the equivalent of adding 11 new towns the size of Fresno to the area. Tulare County **(see Table 4)** is expected to grow to over 1,000,000 residents by 2050, well over doubling its current population."[4]

Table 4 Projected Annual Growth Rates

	Historic Growth Rates 1990-2007	Projected Growth Rates 2007-2030
County Total	1.9%	2.4%
Incorporated	2.8%	2.9%
Unincorporated	0.46%	1.3%

Growth Rate

As noted in the 2010 General Plan Background Report, the unincorporated areas of Tulare County have a 1.3% projected annual growth rate from 2007 to 2030. This 1.3% annual growth rate is applied to Cutler-Orosi.

Median Age

The median age in Cutler went up from 23.5 in 2000 to 24.5 in 2017 and in Orosi from 24.6 in 2000 to 28.8 in 2017. Cutler-Orosi's median age is lower than the median age of Tulare County and of the State of California **(see Table 5)**.

Table 5 Median Age (2000 and 2017)

Geography	2000 Median age (years)	2017 Median age (years)
California	33.3	36.1
Tulare County	29.2	30.6
Cutler CDP	23.5	24.5
Orosi CDP	24.6	28.8

Source: California Department of Finance

Cutler-Orosi has a higher percentage of persons age 18 and under at 38.6% and 32.4%; respectively, than Tulare County (31.4%) and the State of California (23.4%). Cutler-Orosi also has a lower elderly population. Persons 60 years old and older made up 2.0% in Cutler and 4.1% in Orosi, comparatively, persons 60 years and older in Tulare County was 13.2% and in the State of California was 16.4% **(see Table 6**).

Table 6 Age Percentage 2017

Geography	Persons Under 5 years	Persons Under 18 years	Persons Age 21+	Persons Age 60+	Persons Age 65+
California	6.4%	23.4%	72.4%	16.4%	13.2%
Tulare County	8.6%	31.4%	63.9%	13.2%	10.7%
Cutler CDP	8.1%	38.6%	57.4%	2.0%	5.4%
Orosi CDP	6.4%	32.4%	63.0%	4.1%	8.0%

Source: California Department of Finance

Ethnicity and Race

In 2000 **(see Table 7)**, 34.5 % of Cutler's and 48.4% of Orosi's population were white, 0.4% for

[4] Tulare County Regional Blueprint, page 7

both Cutler-Orosi were African American, 1.2% for Cutler's and 0.5% for Orosi were Native American, 0.8% for Cutler and 10.2% for Orosi were Asian, and 4.5% for Cutler and 5.5% were Orosi were two races or more. Approximately 92.1% for Cutler and 77.6% for Orosi were Hispanic (of any race).

Table 7 Race and Ethnicity (2000)

	Total Population	White	Hispanic or Latino (of any race)	Black or African American	American Indian and Alaska Native	Asian	Total Population of Two or More Races
California	33,871,648	20,170,059	10,966,556	2,263,882	333,346	3,697,513	1,607,646
Tulare County	368,021	213,751	186,846	5,852	5,737	12,018	16,938
Cutler CDP	4,491	1,547	4,136	17	53	37	204
Orosi CDP	7,318	2,153	5,679	26	39	747	406
Cutler % of Total	-	34.5%	92.1%	0.4%	1.2%	0.8%	4.5%
Orosi % of Total	-	48.4%	77.6%	0.4%	0.5%	10.2%	5.5%

Source: California Department of Finance

In 2017 **(see Table 8)**, 1.6% of Cutler's and 3.3% of Orosi's population were white. Approximately 98.8% of Cutler and 85.58% of Orosi were Hispanic (of any race). Between 2000 and 2017, the proportion of the White population declined in both Cutler-Orosi; from 34.5% to 1.6% and in Cutler and from 48.4% to 3.3% in Orosi. During this time, the African American population declined in both Cutler and Orosi. The Asian population percentage increased in Orosi from 0.8% to 10.6% and declined in Cutler from 0.8% to 0.0%. The two or more race demographic declined in both communities from 4.5% to 0.0% in Cutler and 5.5% to 0.6% in Orosi. The Hispanic (of any race) increased from 92.1% to 98.8% in Cutler and increased from 77.6% to 85.5% in Orosi.

Table 8 Race and Ethnicity (2017)

	Total Population	White	Hispanic or Latino (of any race)	Black or African American	American Indian and Alaska Native	Asian	Total Population of Two or More Races
California	38,982,847	14,777,594	15,105,806	2,161,459	117,813	5,427,928	1,140,164
Tulare County	458,809	135,372	291,867	5,973	3,029	14,622	6,709
Cutler CDP	5,850	94	5,756	0	0	0	0
Orosi CDP	7,760	255	6,632	0	0	826	47
Cutler % of Total	-	1.6%	98.8%	0.0%	0.0%	0.0%	0.0%
Orosi % of Total	-	3.3%	85.5%	0.0%	0.0%	10.6%	0.6%

Source: California Department of Finance

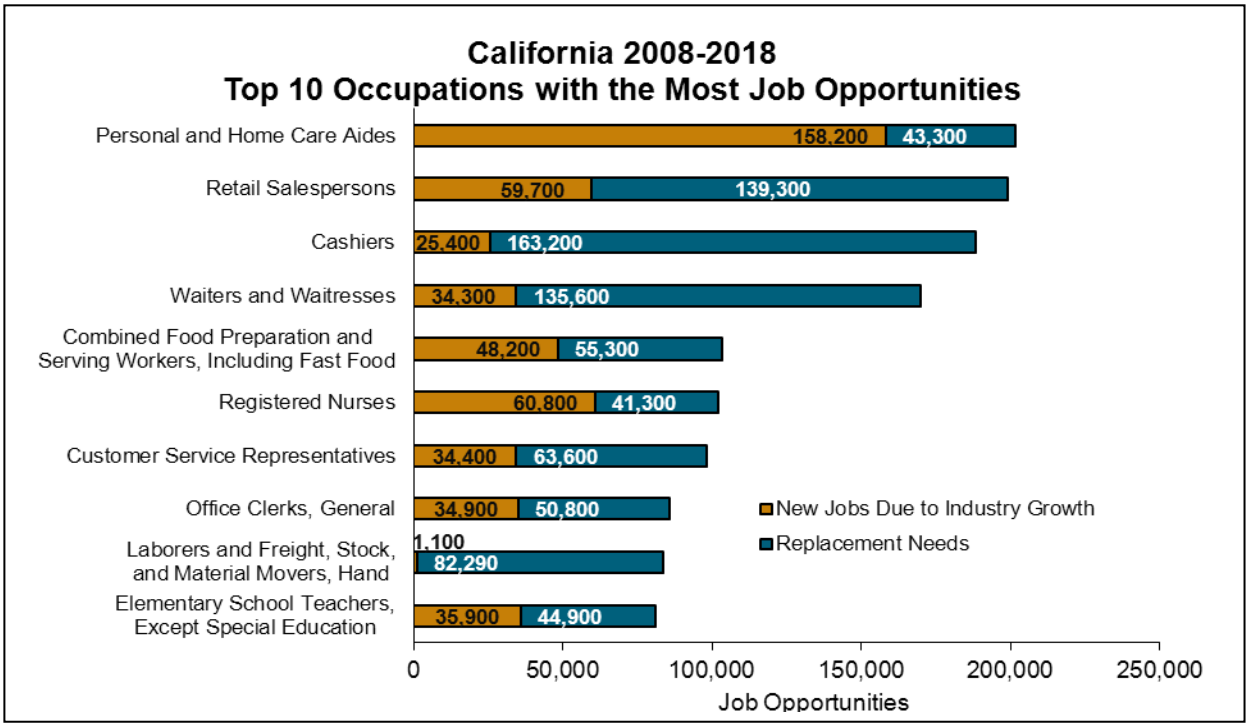
Economic Conditions

Employment Projections California

"By the end of the 2008-2018 projection period, total nonfarm employment in California is projected to grow to nearly 16.5 million jobs. This exceeds peak job level of just over 15.2 million jobs reached before the Great Recession by over 1.2 million jobs. From June 2007 to June 2009, 1.1 million jobs were lost (not seasonally adjusted). Over the 2008-to-2018 projections period, nonfarm employment is expected to rebound by 1,511,100 jobs as the economy recovers from these recessionary job losses. More than 50 percent of all projected nonfarm job growth is in education services (private), health care, social assistance, and professional and business services. The largest number of new jobs is expected in education services, health care, and social assistance, with a gain of more than 421,000 jobs.

Factors fueling the economic recovery in California include the state's population growth and a rise in foreign imports and exports… The state's population increased by more than 3.3 million from 2000 to 2010 and the California Department of Finance projects the population will increase by another 4.3 million from 2010 to 2020. A steady increase in foreign imports and exports has strengthened the wholesale, retail, and transportation industry sectors."[5]

[5] California Labor and Market and Economic Analysis, 2012, page 27



Source: California Employment Development Dept., California Labor and Market and Economic

Tulare County's Local Economy

Similar to the broader Central Valley area, Tulare County's economy has been largely based on agriculture, food processing, and manufacturing, while professional services jobs have been limited. Tulare is the second most productive agricultural county in a State that itself is by far the most productive in the nation. Overall, agribusinesses produced $6 billion in commodities in 2016 with the County considered one of the largest milk producers in the United States."[6]

Tulare County is also a major distribution hub because of its central location in the State, 200 miles north of Los Angeles and 225 miles south of San Francisco. The County's employment base has been significantly impacted by the recent downturn with unemployment increasing to 18.3 percent in January 2010, significantly above the historic range of between 8.5 and 18.2 since 1990. In 2008, the median household income was approximately $44,000.

The county's major employers are Tulare County government, Porterville Development Center, both (Kaweah Delta Healthcare, and Ruiz Food Products). The top 20 employers combine for about 19,300 jobs, or 11 percent of the overall county employment. The major distributors include Jo-Ann Fabrics, VF Distribution, Wal-Mart, and Best Buy Electronics that combine for nearly 3.5 million square feet of distribution space. The county's overall industrial market includes about 23 million square feet of building space."[7]

[6] 2017 Tulare County annual Crop and Livestock Report
[7] Visalia General Plan Update: Existing Conditions Report, page 3-16

Unemployment in Tulare County

According to the 2030 Update of the Tulare County General Plan, Tulare County's economy has historically been driven by agriculture and has had one of the largest agricultural outputs of any county in the US. Nearly 20% of the employment in Cutler-Orosi is agriculturally related according to the Tulare County Housing Element. Despite this, the Tulare County unemployment rate has remained consistently higher than the State average, which can be largely attributed to the seasonal nature of agricultural production.

According to the California Department of Finance, the 2013-2017 American Community Survey **(see Table 9)** indicated that the unemployment rate in Cutler was 13.1% and Orosi had an unemployment rate of 20.0% while Tulare County's unemployment rate was 10.0%. The State of California's unemployment rate was 7.7%.

Table 9 American Community Survey: Unemployment 2013-2017

Geography	Population	Total Civilian Labor Force	Unemployment
California	38,982,847	19,485,061	7.7%
Tulare County	458,809	193,225	10.0%
Cutler CDP	5,850	2,208	13.1%
Orosi CDP	7,760	3,334	20.0%

Source: California Department of Finance

Income

Mean and Median income **(see Table 10)** in Cutler-Orosi is very low compared to Tulare County and the State of California. Average median household income for Cutler was $31,939 and Orosi was $35,798 compared to $44,871 for Tulare County and $67,169 for the State of California.

Table 10 - 2013-2017 American Community Survey: Income

Geography	Median household income (dollars)	Mean household income (dollars)	Median family income (dollars)	Mean family income (dollars)	Per capita income (dollars)
California	$67,169	$96,104	$76,975	$106,970	$33,128
Tulare County	$44,871	$62,325	$47,280	$65,927	$18,927
Cutler CDP	$31,939	$36,990	$30,760	$32,501	$8,436
Orosi CDP	$35,798	$46,444	$41,379	$40,839	$12,163

Source: California Department of Finance

The mean family income for Cutler was $32,501 and Orosi was $40,839 compared to $65,927 for Tulare County and $106,970 for the State of California. Average per capita income for Cutler was also low at $8,436 and Orosi was $12,163 compared to $18,927 for Tulare County and $33,128 for the State of California.

Poverty

According to the California Department of Finance, the 2013-2017 American Community Survey **(see Table 11)** indicated that 39.7% of all families living in Cutler lived below the poverty line and 24.3% of all families in Orosi lived below the poverty line. For all people Cutler (47.5%) and Orosi (25.7%) had a higher level of poverty compared to Tulare County at 27.1% and the State of California at 15.1%. The highest differential was the poverty rate of persons under 18 years. Poverty rate for persons under 18 years for Cutler was 61.6% and Orosi was 46.0% compared to 36.2% for Tulare County and 20.8% for the State of California.

Table 11 - 2013-2017 American Community Survey: Poverty

Geography	All families	Married couple families	Families with female householder, no husband present	All people	Persons under 18 years
California	11.1%	6.6%	26.0%	15.1%	20.8%
Tulare County	23.0%	15.4%	42.2%	27.1%	36.2%
Cutler CDP	39.7%	27.7%	52.0%	47.5%	61.6%
Orosi CDP	24.3%	21.3%	29.9%	25.7%	46.0%

Source: California Department of Finance

Housing Characteristics

Housing Units

During the ensuing years between 2000 and 2017 **(see Table 12)**, the number of housing units in Cutler increased from 973 to 1,293, and in Orosi increased from 1,741 to 2,076. This represents an increase of 32.9% for Cutler, and 19.2% for Orosi.

Table 12 - Housing Units (2000 & 2017)

Geography	2000 Total housing units	2017 Total housing units	Percent Increase
California	13,680,081	13,996,299	2.3%
Tulare County	141,696	146,712	3.5.%
Cutler CDP	973	1,293	32.9%
Orosi CDP	1,741	2,076	19.2%

Source: California Department of Finance

Housing Types

According to the California Department of Finance, the 2013-2017 American Community Survey (**see Table 13)** indicated that 69.6% of Cutler housing units and 80.0 of Orosi; respectively, were 1-unit detached. In Tulare County 45.4% of the housing units were 1-unit detached, and in California 0.6% of housing units were 1-unit detached.

Table 13 - 2013-2017 American Community Survey: Unit Types				
	California	**Tulare County**	**Cutler CDP**	**Orosi CDP**
Total housing units	13,996,299	146,712	1,293	2,076
1-unit detached	8,131,716	110,555	900	1,661
%	0.6%	45.4%	69.6%	80.0%
1-unit attached	978,110	3,866	26	28
%	1.5%	2.6%	2.0%	1.3%
2 units	343,548	4,084	153	106
%	11.5%	2.8%	11.8%	5.1%
3 or 4 units	775,541	8,342	146	68
%	10.9%	5.7%	11.3%	3.3%
5 to 9 units	857,711	4,084	47	58
%	6.1%	2.8%	3.6%	2.8%
10 to 19 units	728,840	1,667	21	55
%	5.2%	1.1%	1.6%	2.6%
20 or more units	1,647,167	4,027	0	15
%	11.8%	2.7%	0.0%	0.7%
Mobile home	518,818	9,931	0	85
%	3.7%	6.8%	0.0%	4.1%

During the ensuing years between 2010 and 2017 **(see Table 14)**, the home ownership percentage in California decreased by approximately 2.67%. In Tulare County, that percentage decreased by approximately 4.74%. In Cutler, the homeownership percentage decreased by approximately 8.0% and increased by 15.6% in Orosi. While the average household size for both owner- and renter-occupied units decreased in the State of California, Cutler, and Orosi; Tulare County's average household size increased for owner-occupied units but decreased for renter-occupied units.

Table 14 - Ownership and Household Size (2010 & 2017)						
	2010			**2017**		
Geography	**Percent Ownership**	**Average household size of owner-occupied units**	**Average household size of renter-occupied units**	**Percent Ownership**	**Average household size of owner-occupied units**	**Average household size of renter-occupied units**
California	56%	2.95	2.83	54.5%	3.00	2.91
Tulare County	59%	3.24	3.52	56.2%	3.27	3.46
Cutler CDP	43.7%	4.51	4.69	40.2%	3.68	5.34
Orosi CDP	56.3%	4.41	4.43	65.1%	3.91	3.82

Source: California Department of Finance

Housing Conditions

According to the 2015 Cutler Community Housing Condition Survey, approximately 15% of the housing stock in Cutler **(see Table 15)** was sound and 75% of the housing stock were deteriorated and in need of replacing. Conversely, 87% of Orosi's housing stock **(see Table 16)** is sound, and only 15% is deteriorated or dilapidated.

Table 15 - Housing Conditions Survey (Cutler)

Survey Area	Sound		Deteriorated						Dilapidated		Total Units
			Minor		Moderate		Substantial				
	Units	%	Units	%	Units	%	Units	%	Units	%	
Cutler	43	15	35	12	162	57	18	6	24	9	282

Source: Tulare County 2015 Housing Condition Survey, Tulare County 2015 Housing Element

Table 16 - Housing Conditions Survey (Orosi)

Survey Area	Sound		Deteriorated						Dilapidated		Total Units
			Minor		Moderate		Substantial				
	Units	%	Units	%	Units	%	Units	%	Units	%	
Orosi	482	87	17	3	14	3	9	2	31	6	553

Source: Tulare County 2015 Housing Condition Survey, Tulare County 2015 Housing Element

The percentage of substandard housing in Cutler-Orosi increased between 1992 and 2015. The percentage was 30% in 1992, 14% in 2003, 17% in 2009, and 76% in 2015 **(see Table 17)**.

Table 17 - Percentages of Substandard Housing Units in Tulare County Unincorporated Community 1992-2015

	1992 Survey Results	2003 Survey Results	2009 Survey Results	2015 Survey Results
Cutler-Orosi	30	14	17	76

Source: 1992, 2003, 2009, 2015 Tulare County Housing Survey of Unincorporated Communities, 2015 Housing Element

Age of Structures

According to the US Census, the 2013-2017 Community Survey **(see Tables 18 and 19)** noted that 24.9% of the housing structures in Cutler were built between 1980 and 1989 and 26.4% of housing structures in Orosi were built between 1960 and 1969.

Table 18 - 2013-2017 American Community Survey: Age of Structures in Cutler

Age of Structures	Number	Percentage
Built 2014 or later	0	0.0%
Built 2010 to 2013	25	1.9%
Built 2000 to 2009	214	16.6%
Built 1990 to 1999	121	9.4%
Built 1980 to 1989	322	24.9%
Built 1970 to 1979	244	18.9%
Built 1960 to 1969	141	10.9%
Built 1950 to 1959	74	5.7%
Built 1940 to 1949	83	6.4%
Built 1939 or earlier	69	5.3%
Total:	1,293	-

Source: US Census

Table 19 - 2013-2017 American Community Survey: Age of Structures in Orosi

Age of Structures	Number	Percentage
Built 2014 or later	0	0.0%
Built 2010 to 2013	0	0.0%
Built 2000 to 2009	277	13.3%
Built 1990 to 1999	402	19.4%
Built 1980 to 1989	95	4.6%
Built 1970 to 1979	342	16.5%
Built 1960 to 1969	548	26.4%
Built 1950 to 1959	172	8.3%
Built 1940 to 1949	59	2.8%
Built 1939 or earlier	181	8.7%
Total:	2,076	-

Source: US Census

Household Size (Overcrowding)

In 2017 the average owner occupied household size in Cutler was 3.68 and Orosi was 3.91 persons per household **(see Table 20)** and the average renter household size in Cutler was 5.34 and in Orosi was 3.82. By definition, the most common measure of overcrowding is persons per room in a dwelling unit.[8] More than one person for each room of a dwelling unit is considered overcrowding. It is important to note that the measure is based on all rooms of a dwelling unit, not just the number of bedrooms. It is not uncommon for persons to share a bedroom, for example siblings or adults.

Table 20 Average Household Size

Geography	Average Household size (Owner Occupied)	Average Household size (Renter Occupied)
California	3.00	2.91
Tulare County	3.27	3.46
Cutler	3.68	5.34
Orosi	3.91	3.82

2013-2017 American Community Survey 5-Year Estimates

[8] U.S. Department of Housing and Urban Development, "Measuring Overcrowding in Housing" 2007. Page 2 See: http://www.huduser.org/publications/pdf/Measuring_Overcrowding_in_Hsg.pdf

Vacancy Rate

In 2000, the vacancy rate **(see Table 21)** in Cutler was 6.6% and Orosi was 3.6%, which was lower than Tulare County at 7.7% and higher than the State of California at 5.8%. In 2010, the vacancy rate in Cutler was 4.5% and Orosi was 4.1%, which is lower than Tulare County at 8.0% and the

Table 21 - Vacancy Rate (2000 &2010)

Geography	2000			2010		
	Vacancy rate	Homeowner vacancy rate	Rental vacancy rate	Vacancy rate	Homeowner vacancy rate	Rental vacancy rate
California	5.8%	1.4%	10.7%	8.1%	2.1%	6.3%
Tulare County	7.7%	1.8%	5.8%	8.0%	2.4%	5.8%
Cutler CDP	6.6%	0.6%	2.4%	4.5%	1.0%	4.0%
Orosi CDP	3.6%	0.3%	5.5%	4.1%	2.6%	3.7%

Source: California Department of Finance

State of California at 8.1%. While the State of California's rental vacancy rate decreased from 10.7% to 6.3%, the rental vacancy rate in Cutler increased from 2.4% to 4.0% and Orosi decreased from 5.5% to 3.7% between 2000 and 2010. While Tulare County's rental vacancy rate remained at 5.8% during this decade.

Regional Housing Needs Assessment (RHNA)

"State housing element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated prior to each housing element cycle. The current RHNA, [adopted on June 30, 2014] is for the fifth housing element cycle and covers a 9.75-year projection period (January 1, 2014 – September 30, 2023). The Regional Housing Needs Plan (RHNP) describes the methodology developed to allocate the region's housing needs in four income categories (very low, low, moderate, and above moderate) among Tulare County's eight cities and the unincorporated county in accordance with the objectives and factors contained in State law."[9]

The growth projections applied in the Tulare County Housing Element Update are based upon growth projections developed by the State of California. A "Regional Housing Needs Assessment Plan" provides a general measure of each local jurisdiction's responsibility in the provision of housing to meet those needs. The TCAG was responsible for allocating the State's projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in the Housing Element.

"The Sustainable Communities and Climate Protection Act of 2008 (SB 375) was passed to support the State's climate action goals…to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning. The bill mandates each of California's Metropolitan Planning

[9] TCAG. Final Regional Housing Needs Plan for Tulare County 2014-2023. Page i. Accessed July 2021 at: http://www.tularecog.org/wp-content/uploads/2015/07/Final-Regional-Housing-Needs-Plan-for-Tulare-County-2014-2023.pdf

Organizations (MPO) to prepare a sustainable communities strategy as part of its regional transportation plan (RTP). The SCS contains land use, housing and transportation strategies that, if implemented, would allow the region to meet its GHG reduction targets."[10]

"In the past, the RHNA was undertaken in dependently from the RTP. SB 375 requires that the RHNA and RTP/SCS processes be undertaken together to better integrate housing, land use, and transportation planning. The law recognizes the importance of planning for housing and land use in creating sustainable communities where residents of all income levels have access to jobs, services, and housing using transit, or by walking and bicycling."[11]

"In addition to the RHNA requirements, SB 375 requires that TCAG address the region's housing needs in the SCS of the RTP, to include sections on state housing goals (Government Code Section 65080(b)(2)(B)(vi)); identify areas within the region sufficient to house all the population of the region (including all economic segments of the population) over the course of the planning period for the RTP (out to 2040 for the 2040 RTP/SCS); and identify areas within the region sufficient to meet the regional housing needs."[12]

The RHNA housing results are summarized in **Figure 7A**. The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7,081 units per year in the unincorporated portions of the County. The County administratively agreed to a housing share of 7,081 units (726 units per year over the 9.75-year RHNA planning period). The RTP allocates 30% of population to the County. The RHNA bases the housing needs assessment on this percentage.

[10] Ibid. 5.
[11] Ibid.
[12] Op. Cit.

Figure 7A - RHNA 2014-2023

Tulare County Region January 1, 2014 to September 30, 2023								
Jurisdiction	1/1/2014 Housing Unit Control Totals	2023 Housing Unit Control Totals	Estimated 9/30/2023 Housing Units		2024 Housing Unit Control Totals	Housing Units 9/30/2023 (Based on Allocation of 26,910 units)		
			Housing Units	Percent of Total		Total Housing Units	Percent of Total	Net New Housing Units 1/1/2014-9/30/2023
	A	B	C	D	E	F	G	H
Dinuba	6,223	7,106	7,186	4.05%	7,212	7,188	4.05%	965
Exeter	3,803	4,305	4,426	2.50%	4,365	4,428	2.50%	625
Farmersville	2,878	3,253	3,343	1.89%	3,298	3,344	1.89%	466
Lindsay	3,384	3,858	3,972	2.24%	3,914	3,974	2.24%	590
Porterville	17,764	20,331	20,952	11.82%	20,639	20,960	11.82%	3,196
Tulare	20,022	22,908	23,606	13.32%	23,255	23,616	13.32%	3,594
Visalia	47,380	55,411	57,379	32.37%	56,386	57,401	32.37%	10,021
Woodlake	2,187	2,486	2,558	1.44%	2,521	2,559	1.44%	372
Unincorporated County	46,774	52,477	53,834	30.37%	53,151	53,855	30.37%	7,081
Total	**150,415**	**172,134**	**177,255**	**100.00%**	**174,741**	177,325	100.00%	26,910

Sources
Columns A, B, and E: TCAG 2040 Demographic Forecast (2013)
Column C: Estimated using trendline growth between Columns B and E
Column D: Column C divided by countywide total from Column C (177,225)
Column F: Proportionally scaled up from Column D to 9/30/2023 countywide total (177,325)
Column G: Column F divided by countywide total from Column F (177,325)
Column H: Column A subtracted from Column F

Also, as noted in the RHNA, "An underlying principle of the RHNA Methodology is to ensure that affordable housing is equitably distributed throughout the region. The Methodology applies an adjustment factor based on disparities in household income across the TCAG region. The adjustment factor assigns a higher proportion of units affordable to lower income households to jurisdictions that currently have a lower proportion of affordable households compared to the regional average, and assigns a lower proportion of affordable units to jurisdictions that currently have a higher proportion of affordable households than the regional average. The Methodology is intended to help the region achieve income parity (the same proportion of affordable units in each community) by 2050. Table 1 [of the RHNA, Figure 7B in the Community Plan Update] summarizes the overall allocation of units to each jurisdiction and the allocation by the four income categories."[13] It is noted that the RHNA allocation is County-wide and is not specific to Cutler-Orosi.

[13] Op. Cit. 19.

Figure 8B - RHNA 2014-2023
Allocation by Income Category

Table 1: 2014-2023 Final RHNA Allocations by Income Category
Tulare County Region
January 1, 2014 to September 30, 2023

	Total RHNA Allocation	Very Low-Income Allocation		Low-Income Allocation		Affordable Allocation (Combined Low + Very Low-Income)		Moderate-Income Allocation		Above Moderate-Income Allocation	
		Units	Percent of Total RHNA	Units	Percent of Total RHNA	Units	Percent of Total RHNA	Units	Percent of Total RHNA	Units	Percent of Total RHNA
Dinuba	965	211	21.9%	163	16.9%	374	38.8%	121	12.5%	470	48.7%
Exeter	625	143	22.9%	125	20.0%	268	42.9%	85	13.6%	272	43.5%
Farmersville	466	74	15.9%	65	13.9%	139	29.8%	68	14.6%	259	55.6%
Lindsay	590	80	13.6%	80	13.6%	160	27.1%	82	13.9%	348	59.0%
Porterville	3,196	623	19.5%	576	18.0%	1,199	37.5%	566	17.7%	1,431	44.8%
Tulare	3,594	920	25.6%	609	16.9%	1,529	42.5%	613	17.1%	1,452	40.4%
Visalia	10,021	2,616	26.1%	1,931	19.3%	4,547	45.4%	1,802	18.0%	3,672	36.6%
Woodlake	372	71	19.1%	41	11.0%	112	30.1%	69	18.5%	191	51.3%
Unincorporated County	7,081	1,477	20.9%	1,065	15.0%	2,542	35.9%	1,169	16.5%	3,370	47.6%
Total	**26,910**	**6,215**	**23.1%**	**4,655**	**17.3%**	**10,870**	**40.4%**	**4,575**	**17.0%**	**11,465**	**42.6%**

Note: Percentages may not sum to 100 percent due to rounding

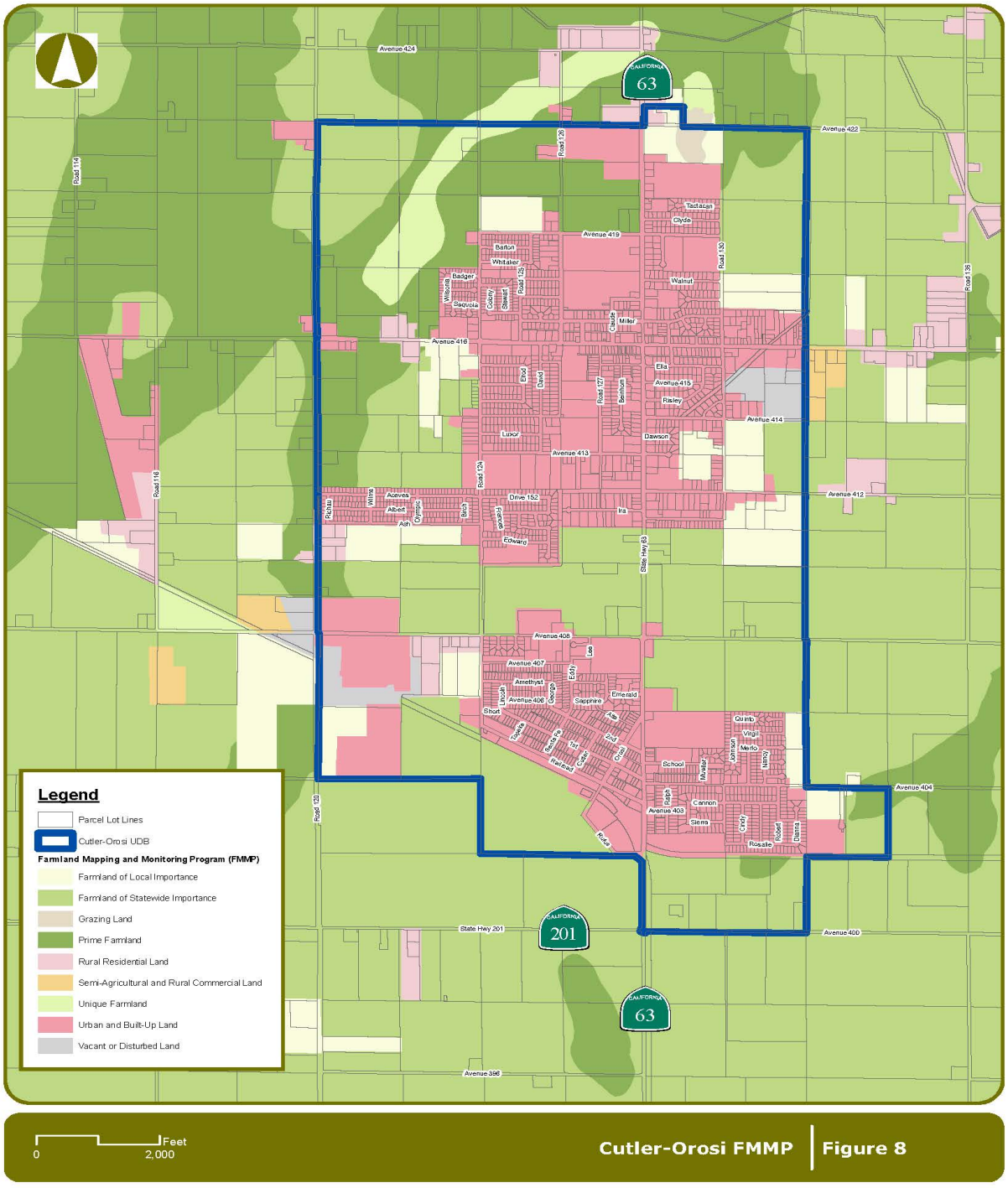
Natural and Cultural Resources

Agriculture

The California Department of Conservation, Division of Land Resource Protection, maintains the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. The program monitors a wide variety of farmland types: Prime Farmland is farmland with the best combination of physical and chemical soil features to sustain long-term agricultural production; Farmland of Statewide Importance is Prime Farmland but has minor shortcomings, such as greater slopes or less ability to store soil moisture; and Unique Farmland has lesser quality soils used for the production of the state's leading agricultural crops.

The area within the existing 2,441.9-acre UDB is designated in the 2017 FMMP maps **(see Figure 8)**. Of these, approximately 1,246.9 acres are designated Urban and Built-up Land, approximately 956.9 acres are designated Prime Farmland.

Figure 9 - FMMP Map



Williamson Act Lands

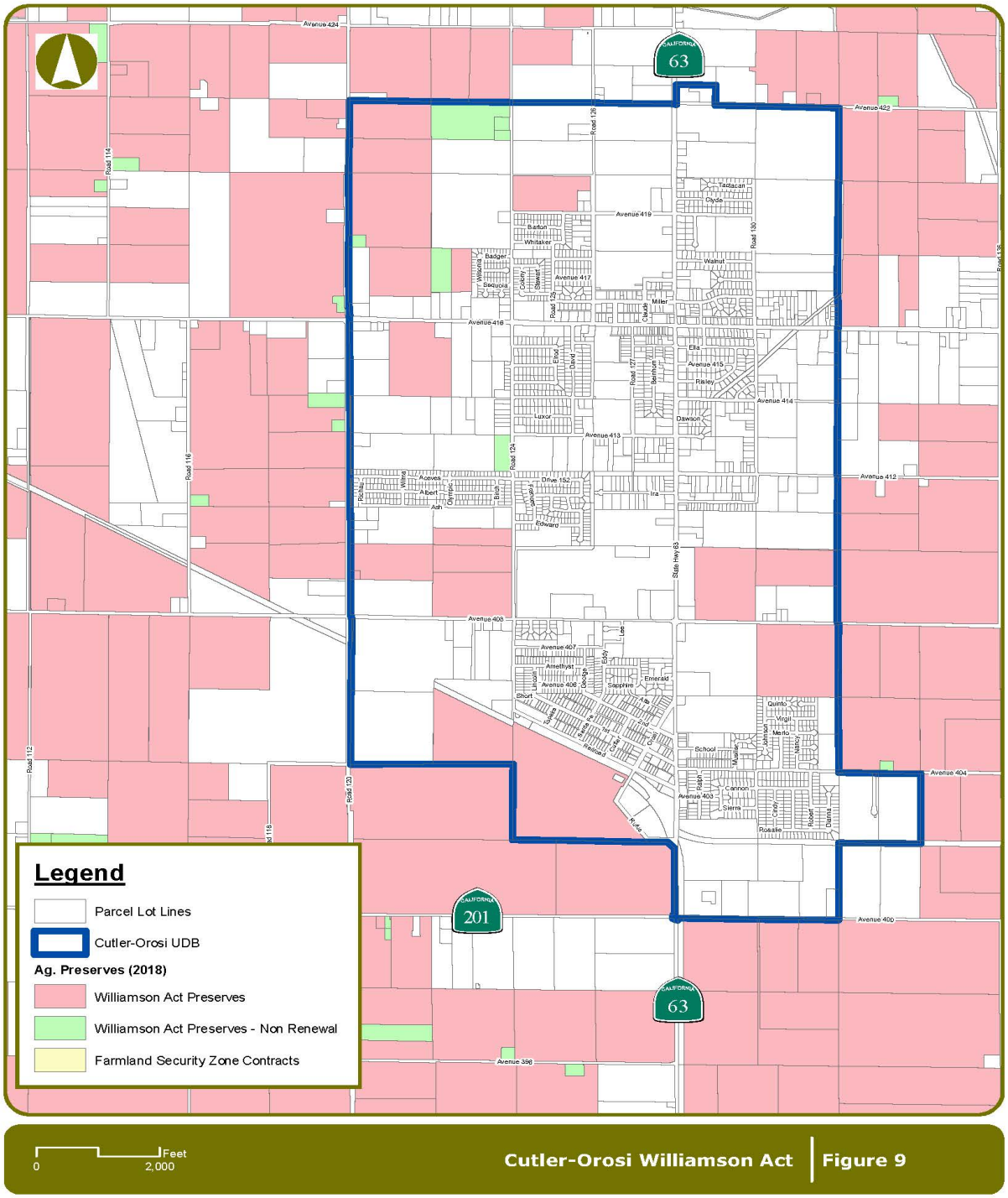
Agricultural land is a resource that must be conserved just like air and water resources. It is also economically important and provides other benefits such as wildlife habitat, groundwater recharge, and open space, which contributes to the rural character of the area.

The importance of agricultural land is underscored by the level of attention state planning law has placed on it. Three mandatory elements of the general plan: 1) land use; 2) open space; and 3) conservation, all require local governments to include a discussion of agricultural lands in their general plans. The County's planning policies also underscore agricultural land importance to the local economy and environment as well.

Within the area, there are several farms in the Williamson Act. The Williamson Act is designed to keep productive farmland of a contract, that the land will not be converted to an urban type use. Land in the Williamson Act is required to remain in agriculture for a 10-year period. Unless a notice of non-renewal is filed, the contract is automatically self-renewing every year for an additional 10-year period.

Fifteen (15) parcels in Cutler-Orosi have entered into land conservation contracts and **(see Figure 9)** are subject to the Williamson Act and within the planning area (proposed UDB)

Figure 10 - Williamson Act Map



Air Quality

The Cutler-Orosi Plan Area is within the San Joaquin Valley Air Basin (SJVAB) and under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAB is classified non-attainment/severe for the State 0_3 1-hour standard, non-attainment for the State 0_3 8-hour standard, non-attainment for the State PM_{10} standard, non-attainment for the federal and State $PM_{2.5}$ standards, and attainment and/or unclassified for the remaining federal and State air quality standards. According to the Tulare County General Plan, the San Joaquin Valley has some of the worst air quality in the nation. The CO and NO_x emissions are typically generated by motor vehicles (mobile sources). The ROG emissions are generated by mobile sources and agriculture. Although emissions have been shown to be decreasing in recent years, the SJVAB continues to exceed state and federal air quality emission standards.

Executive Order S-3-05, issued by Governor Schwarzenegger in 2005, established targets for greenhouse gas (GHG) emissions for the State. The Global Warming Solutions Act of 2006 (or Assembly Bill (AB) 32) directed the California Air Resources Board (CARB) to develop and adopt statewide GHG emission limits in order to reduce emission levels to those experienced in 1990, by the year 2020. In order to achieve those targets, CARB adopted the Climate Change Scoping Plan in December 2008.

The Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill (SB) 375, builds upon AB 32 by requiring CARB to develop regional GHG emissions reduction targets for passenger vehicles. Then each Metropolitan Planning Organization (MPO) must prepare a Sustainable Communities Strategy (SCS) to demonstrate how the region will meet its targets. The SCS will be incorporated into the Regional Transportation Plan (RTP).

The SJVAPCD provides a list of potential air quality mitigation measures that are applicable to General Plan updates and community plans:

- Adopt air quality element/general plan air quality policies/specific plan policies
- Adopt Local Air Quality Mitigation Fee Program
- Fund TCM program: transit, bicycle, pedestrian, traffic flow improvements, transportation system management, rideshare, telecommuting, video-conferencing, etc.
- Adopt air quality enhancing design guidelines/standards
- Designate pedestrian/transit oriented development areas on general plan/specific plan/planned development land use maps
- Adopt ordinance limiting wood burning appliances/fireplace installations
- Fugitive dust regulation enforcement coordinated with SJVUAPCD
- Energy efficiency incentive programs
- Local alternative fuels programs
- Coordinate location of land uses to separate odor generators and sensitive receptors

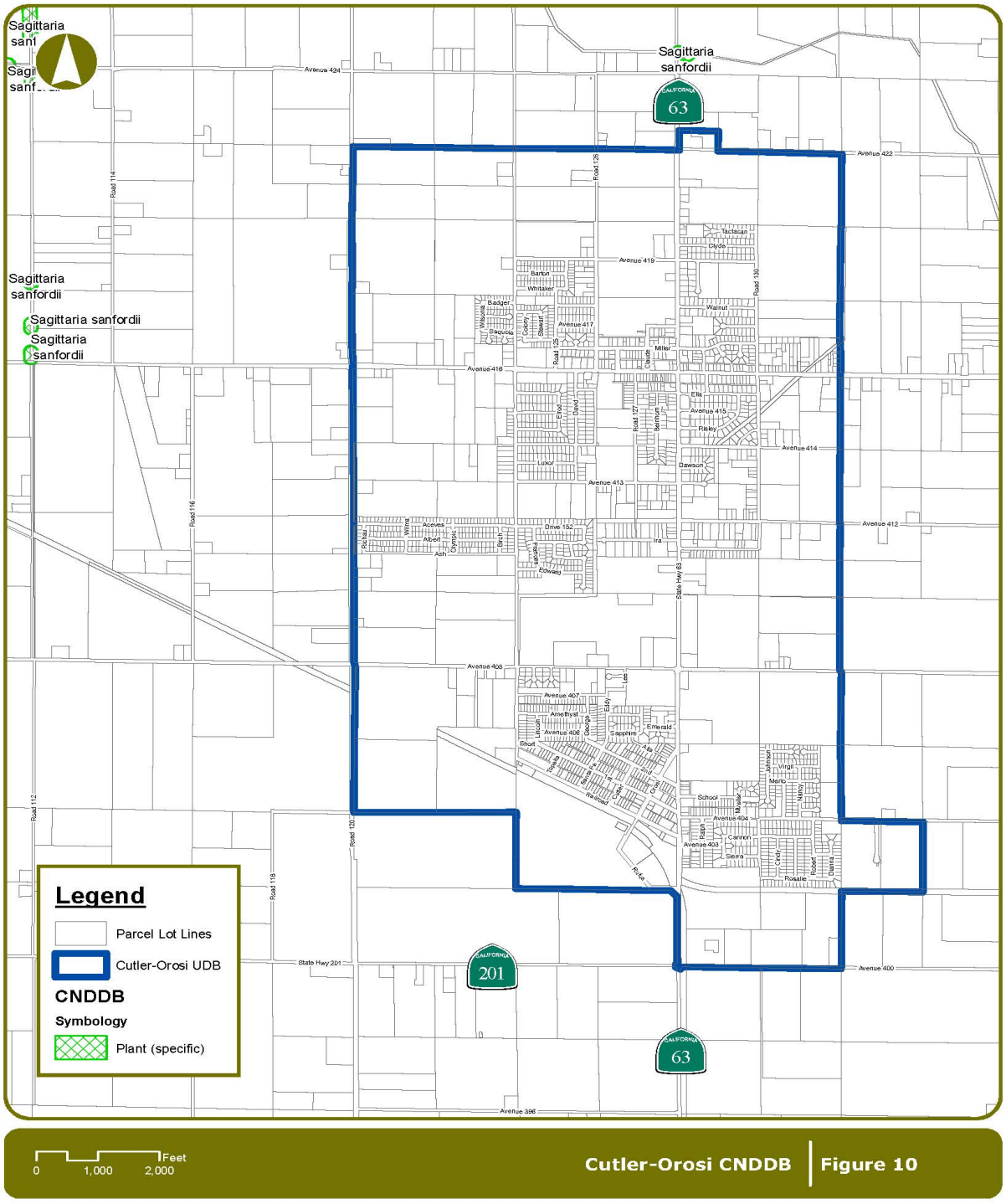
Air quality is directly related to land use; it is also related to the configuration of land, vegetation, climate, wind direction and velocity, and production of man-made impurities which change the natural qualities of the air. Because Cutler-Orosi is located near the southern end of the Valley with prevailing winds from the northwest, it is in a vulnerable position for the accumulation of adversely modified air, particularly when a temperature inversion occurs which holds down surface air along with its pollutants.

Local air pollution sources within the general vicinity of Cutler-Orosi and within the community itself include SR 63, approaching and departing jet aircraft, and industrial firms emitting dust and odors, and agricultural activities. Dust and odors are concerns of residents within the area, particularly from nearby agricultural operations.

Biological Resources

Cutler-Orosi is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development. A California Natural Diversity Database (CNDDB) search conducted on July 25, 2018, **(see Figure 10)** indicated there are special status species within the Orange Cove South Quadrant Species List (which includes the Cutler-Orosi Planning Area) consisting of three animal species and one plant species: California tiger salamander (Ambystoma californiense, Federal and State threatened); vernal pool fairy shimp (Branchinecta lynchi, Federal Threatened); and vernal pool tadpole shrimp (Lepidurus packardi Federally endangered); and San Joaquin Valley adobe sunburst (Pseudobahia peirsonii, Federal Threatened and State Endangered).

Figure 11 - Cutler-Orosi CNDDB Map



Cultural Resources

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[14]

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."[15]

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167."[16]

On October 23, 2018, the Southern San Joaquin Valley Information Center, Bakersfield (SSJVIC) conducted a cultural resources records search at the request of RMA Planning Branch staff. According to the information provided by the SSJVIC, there have been 17 previous cultural resource study conducted within the project area and no additional studies conducted within the one-half mile radius. However, until the specific location of a development proposal occurs, the locations and nature of the resources will remain confidential and will only be shared with an applicant and remain confidential until otherwise determined by the courts.

There are two (2) recorded cultural resources within the project area. There is one recorded resource within the one-half mile resource. These resources consist of two historic era buildings and one historic era canal. The Orosi Branch Library has been given a National Register status code of 1S, indicating the individual property has been listed in the National Register of Historic Places by the Keeper. It is also listed in the California Register of Historical Resources. There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

[14] Tulare County 2030 General Plan. Page 8-5.
[15] Ibid. Page 8-5.
[16] Op. Cit. Page 8-6.

Orosi Branch Library located at El Monte Way/Avenue 416 across from Eddy Road, just west of SR 63, was built in 1921 with a $3,000 grant from the Carnegie Foundation; while the foundation had issued the grant in 1917, construction was held up for four years by World War I. The wood frame library is a California bungalow, a plain style. The Orosi Branch Library was added to the National Register of Historic Placed on August 25, 1983.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on October 8, 2018 with a request that they conduct a sacred lands files (SLF) search. The NAHC provided the results of its SLF search dated October 18, 2018 indicating "negative results" (that is, no sacred lands are known to be located in the Lemon Cove Planning area). The following Native American tribes were contacted on October 24, 2018 in order to solicit their interest regarding tribal consultation: Kern Valley Indian Community, Kern Valley Indian Community, Santa Rosa Rancheria Tachi Yokut Tribe, Tubatulabals of Kern Valley, Tule River Indian Tribe, and Wuksache Indian Tribe/Eshom Valley Band.

Geology & Seismic Hazards

The southern San Joaquin Valley is a broad arid plain, essentially level underlain by about 28,000 feet of marine and continental strata with the sediments derived from areas now occupied by mountain ranges. "Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates, which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges."[17]

"Groundshaking is the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of groundshaking, which is directly related to the magnitude of a quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased groundshaking over longer periods of time, thereby affecting a

[17] General Plan Background Report, page 8-5

larger area. Groundshaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county, which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake."[18]

"There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault.** The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the "Central California Active Area," where many earthquakes have originated.
- **Owens Valley Fault Group.** The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- **Clovis Fault.** The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, and is therefore classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts."[19]

According to the five County Seismic Safety Element[20] and Figure 10-5 (Seismic/Geologic Hazards and Microzone) of the General Plan Health and Safety (GPHSE)[21] Cutler / Orosi area is located in the "V1 zone: an area of "low" seismic risk. The San Andreas Fault is the nearest active seismic area, located approximately 60 miles to the west. The Element states that active faults do not exist in Tulare County.

Soils Characteristics

According to the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), and the Soil Survey of Tulare County, the following soil types are

[18] General Plan Background Report, page 8-7
[19] General Plan Background Report, pages 8-6 and 8-7
[20] Tulare County Association of Governments. Five County Seismic Safety Element, 1974. Page 15
[21] Faults identified in Tulare County 2030 General Plan, Figure 10-1 and on the California Geological Survey website http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html

located in Cutler-Orosi **(see Figure 11)**. The following soil types for Cutler-Orosi are provided below.

Calgro/Calgro, consists of moderately deep to a duripan, moderately well drained soils formed in alluvium derived from granitic rock source.

Crosscreek/Kai Association, is formed by the chemical and mechanical alteration of the Kai soil that originally formed in alluvium derived from granitic rock sources. The soil is well drained, and the permeability is moderately slow above the duripan due to sodicity and very slow in the duripan. The available water capacity is moderate to high and the shrink-swell potential is moderate.

Exeter loam, 0 to 2 percent slopes, consists of moderately deep to a duripan, moderately well drained soils that formed in alluvium mainly from granitic sources.

Flamen Loam is an alluvium derived mainly from granitic rock sources and is found on stream terraces. The soil has moderate shrink-swell capacity, is deep to duripan and is moderately well drained. Flamen loam is classified as prime farmland when it is irrigated and has a Class II agricultural rating. .

Greenfield sandy loam, 0 to 9 percent slopes, consists of deep, well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield sandy loam is located in the northwest quadrant of Orosi. It is a class I agricultural soil which is well-suited for urbanization, including buildings, streets and roads, and septic tanks.

Hanford Sandy loam, 0 to 2 percent slopes, consists of very deep, well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are on stream bottoms, floodplains and alluvial fans.

Honcut sandy loam, 0 to 2 percent slopes, consists of very deep, well drained soils that formed in moderately coarse textured alluvium from basic igneous and granitic rocks. Honcut soils are on floodplains and moderately sloping alluvial fans.

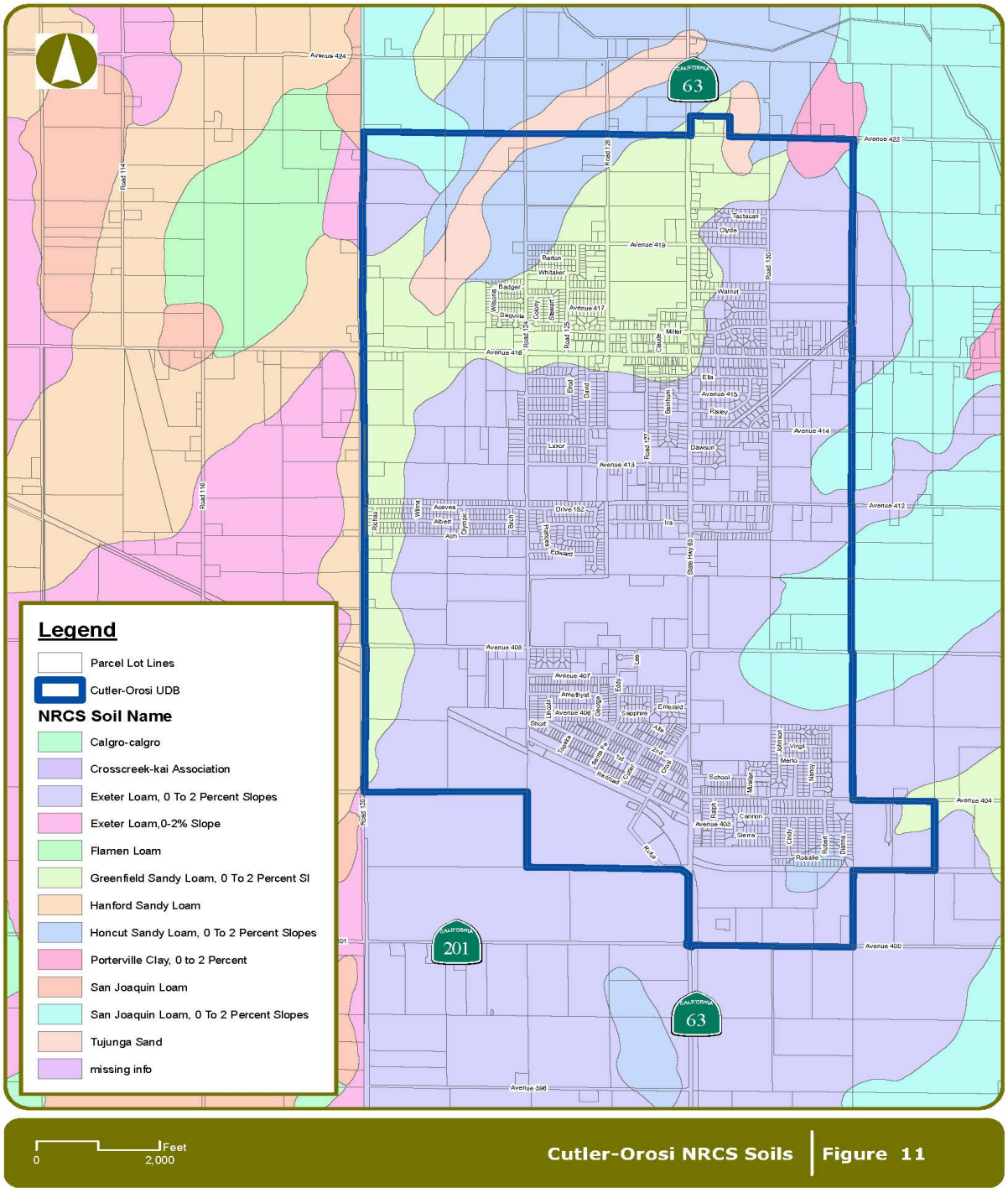
Porterville Clay, 0 to 2 percent slopes, consists of 32+ inches of brown and dark reddish brown clay overlying dark reddish gray clay and sandy clay with a high shrink swell potential.

San Joaquin Loam, is moderately deep to a hardpan, well drained and nearly level. This soil is suitable for orchards, vineyards, and cultivated crops but is somewhat limited by the presence of hardpan which restricts root growth. This problem can be alleviated by ripping and shattering the hardpan. The soil is poorly suited to urban uses because of a high clay content, very slow permeability and a cemented hardpan. Septic tank filter fields are severely limited for these reasons.

San Joaquin loam, 0 to 2 percent slopes, consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources.

Tujunga sand, consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas.

Figure 12 - NRCS Soils Map



Greenhouse Gases

"Executive Order S-3-05 was signed by Governor Schwarzenegger on June 1, 2005. This executive order established [GHG] emission reduction targets for California. Specifically, the executive order established the following targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, and agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the EO [executive order], the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state…"[22]

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

The Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill (SB) 375, builds upon AB 32 by requiring CARB to develop regional GHG emissions reduction targets for passenger vehicles. Then each Metropolitan Planning Organization (MPO) must prepare a Sustainable Communities Strategy (SCS) to demonstrate how the region will meet its targets. The SCS will be incorporated into the Regional Transportation Plan (RTP).

The San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted the *Climate Change Action Plan* (CCAP) in August 2008. "The (CCAP) directed the District Air Pollution Control Officer to develop guidance to assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas (GHG) emissions on global climate change.

On December 17, 2009, the San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted

[22] Tulare County General Plan 2030 Update RDEIR, pages 3.4-4 to 3.4-5

the guidance: *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects* under CEQA, and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA.

"The Tulare County Climate Action Plan (CAP) (last updated in 2016), serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation."[23]

Federal Emergency Management Agency (FEMA)

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community-Panel Number 06107C0345E, Panel No. 345 dated June 16, 2009, **(see Figure 12)** shows the majority of the Cutler-Orosi footprint is within Flood Zone AO, AE, AH, X (shaded), and X (unshaded). A substantial portion of Cuter/Orosi are subject to 100 and 500 year flood hazard. FEMA requires development in Flood Zones AE to be constructed so that a building's ground floor elevation is above the flood contour line existing in the flood are.

"Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released."[24] "Flood events in the Tulare Lake region are caused by rainfall, snowmelt, and the resultant rising of normally dry lakes. Although significant progress has been made to contain floodwaters in the region, improvements to the flood control system are still needed to lessen the flood risk to life and property."[25]

"Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). "Floodplain" or "flood-prone area" means any land area susceptible to being inundated by water from any source. "Base Flood" is the flood having a one percent chance of being equaled or exceeded in any given year. "One-hundred-year flood" or "100 year flood" has the same meaning as "base flood." "Special flood hazard area" is the land in the floodplain subject to a one percent or greater chance of flooding in any given year. "Floodway" means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood

[23] Tulare County Climate Action Plan, page 1
[24] General Plan Background Report, page 8-13
[25] California Water Plan Update 2009, Tulare Lake, page TL-28 to TL-29

without cumulatively increasing the water surface elevation more than one (1) foot. The floodway is delineated on the Flood Boundary Floodway Map, on maps adopted by the State Reclamation Board when acting within its jurisdiction, and on the County Zoning Map (signified by the F-1 Primary Flood Plain Zone). The F-2 Secondary Flood Plain Combining Zone which is intended for application to those areas of the County which lie within the fringe area or setback of the flood plain and are subject to less severe inundation during flooding conditions than occur in the F-1 Zone.

FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). These areas are designated as Zone A, AO, A1-30, AE, A99, or AH on the FIRM. A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms."[26] Although some areas of Tulare County have experienced major flooding along its major rivers, the Cutler-Orosi Plan Area has not. There are portions of Cutler-Orosi, however, that are within and adjacent to the FEMA 500 and 100 year flood zones. According to the Tulare County General Plan Update, substantial flooding could occur in Tulare County if the two (2) major dams were to experience failure. The primary source of floodwaters comes from Sand Creek. Sand Creek runs in a southwesterly direction through the northwestern part of Tulare County.

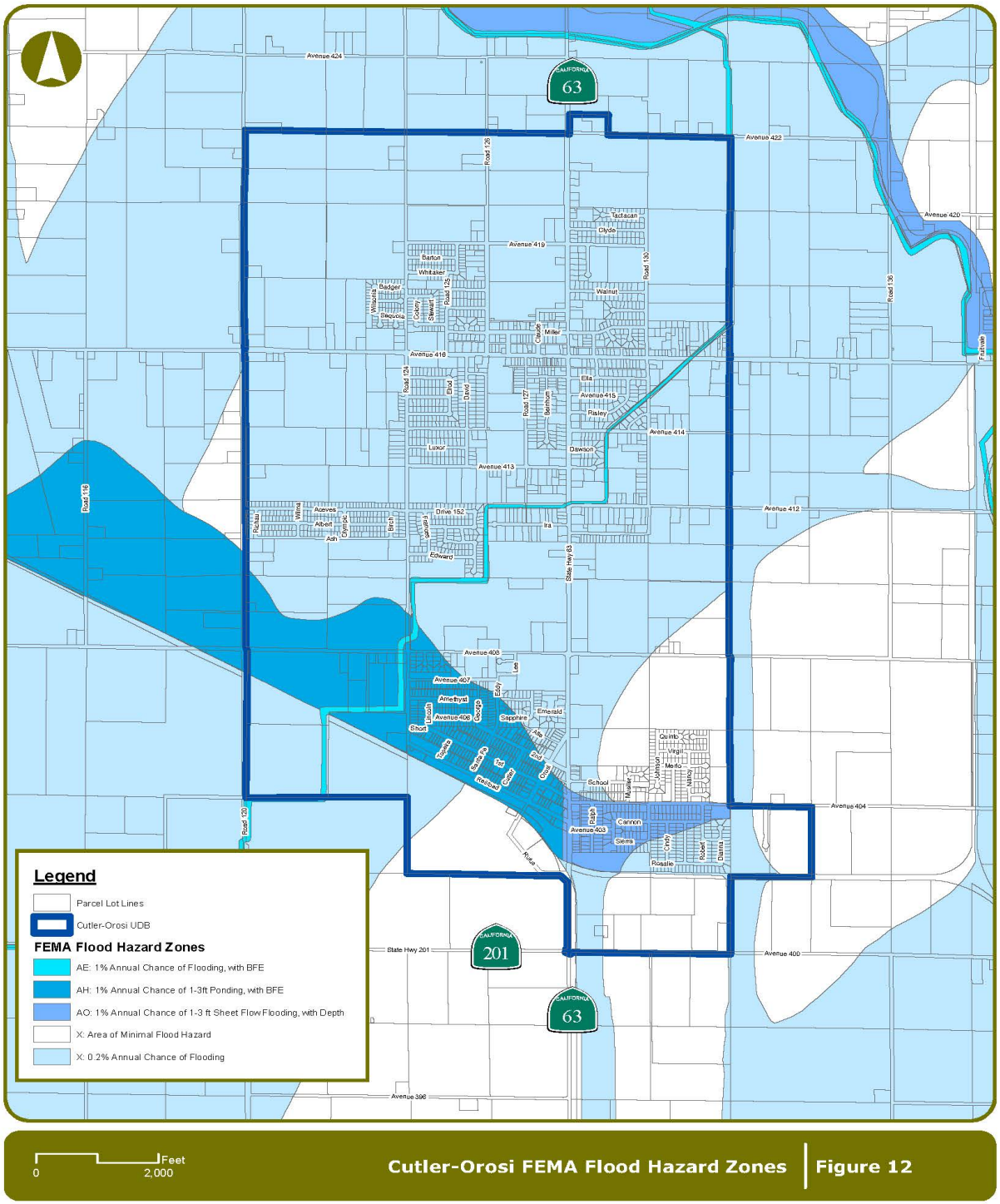
Sand Creek lies within the Sand Creek Dam inundation zone due to potential flood concerns if there was a dam failure. Sand Creek in Tulare County, California and displayed on the Monson USGS quad topo map. Sand Creek Dam is used for drinking water, fish and wildlife protection and flood control, among other things. Construction of the dam was completed in 1980. At normal levels, it has a surface area of 55 acres. The dam is owned by Tulare County Resource Management Agency. Sand Creek is rock fill. Its height is 60 feet with a length of 933 feet. Normal storage is 1,050 acre. It drains an area of 26.3 square miles. [FEMA Special Flood Hazard Areas and that the inundation zone must be included on hazard disclosures pertaining to real estate contracts].

The County of Tulare has taken steps to be a part of the National Flood Insurance Program (NFIP), by actively adopting minimum regulatory standards as set forth by the Federal Emergency Management Agency (FEMA). The National Flood Insurance Program (NFIP) is administered by the (FEMA) to offer flood insurance to properties located in special flood hazard areas (SFHAs). Information about the NFIP, is available at the following website: www.fema.gov. As part of the county's participation in the NFIP, individuals are eligible to obtain flood insurance. Further flood information is available at the County of Tulare Resource Management Agency at the following website: https://tularecounty.ca.gov/rma/index.cfm/public-works/flood-information/.

On June 16, 2009, Tulare County adopted the new Digital Flood Insurance Rate Maps (DFIRMs). Information is available to determine if a property is located in a SFHA by using the following FEMA Map Service Center link as follows: https://msc.fema.gov/portal.

[26] General Plan Background Report, page 8-14

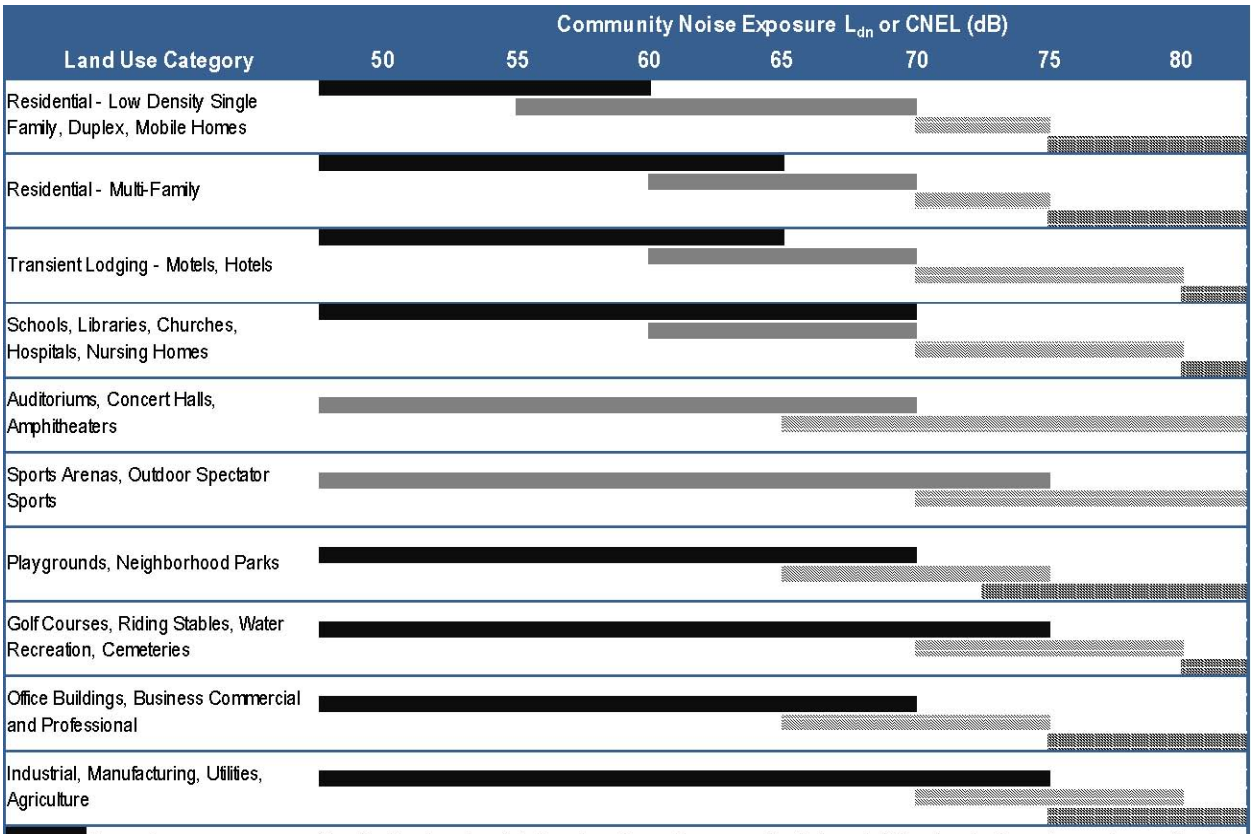
Figure 13 – FEMA Flood Map



Noise

State of California General Plan Guidelines (California Governor's Office of Planning and Research, 2003) identifies guidelines for the Noise Elements of city and county General Plans, including a sound level/land-use compatibility chart that categorized, by land use, outdoor Ldn ranges in up to four categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable). These guidelines provide the State's recommendations for city and county General Plan Noise Elements **(see Figure 13)**.

Figure 14 - Community Noise Exposure



Source: Tulare County General Plan

The 2010 Recirculated Environmental Impact Report (RDEIR) prepared for the Tulare County General Plan Update included the following information regarding freeway and railroad noise. Baseline traffic noise contours for major roads in the County were developed using Sound32 (Caltrans' computer implementation of the FHWA Traffic Noise Prediction Model). Table 3.5-3 in the RDEIR summarized the daily traffic volumes, the predicted Ldn noise level at 100 feet from the roadway centerline is approximately 79 feet, and the distance from the roadway centerline to the 60-, 65-, and 70-dB-Ldn contours are 82 feet, 1,813 feet, and 3,907 feet respectively.

The Noise Element identifies noise-impacted areas throughout Tulare County. These areas include lands, which have existing or projected noise levels exceeding 60 decibels (dBa) Ldn. This decibel figure is considered the maximum normally acceptable noise level for single-family residential areas. The two primary noise sources are SR 63 and Avenue 416. Together, these noise sources place a portion of the urbanized portion of Cutler-Orosi within the 60 dB Ldn noise contour. Roadways and traffic noise are the dominant source of ambient noise in the County.

The Health and Safety Element of the Tulare County General Plan adopted two countywide goals regarding noise in 2012. They are: 1) Protect the citizens of Tulare County from the harmful effects of exposure to excessive noise; and 2) Protect the economic base of Tulare County by preventing the encroachment of incompatible land uses near known noise-producing industries, railroads, airports and other sources. The Tulare County General Plan 2030 models noise contours for lands adjacent to freeways, airports, and local industries for the base year (1986) and provides projected contours for the year 2010. The noise contours were prepared in terms of either the community noise equivalent level (CNEL) or day-night average decibel level (Ldn), which is descriptive of the total noise exposure at a given location for an annual average day.

The Noise Element includes performance standards for new residential or other noise-sensitive land uses which are to be located near noise-impacted areas. The Element indicates that these uses will not be permitted unless effective design measures can be integrated into the development to mitigate the impact of noise. **Table 22** summarizes the daily traffic volumes on SR 63 from Avenue 400 to Emerald Drive, Emerald Drive to Avenue 416, Avenue 416 to Avenue 422 and on Avenue 416 from Road 120 to SR 63 and SR 63 to Boyd Drive.

Table 22 - Noise Levels					
Location	ADT	From Roadway Centerline			
		Distance (feet) to 70 Ldn Contour	Distance (feet) to 65 Ldn Contour	Distance (feet) to 60 Ldn Contour	Distance (feet) to 55 Ldn Contour
SR 63 Ave 400 to Emerald Dr.	8,300	34	74	159	343
SR 63 Emerald Dr. to Ave 416	13,000	43	92	198	426
SR 63 Ave 416 to Ave 422	7,200	29	62	133	287
Ave 416 Road 120 to SR 63	8,000	37	79	171	368
Ave 416 SR 63 to Boyd Dr	850	8	18	38	83

Source: 2010 General Plan Background Report

Infrastructure

Infrastructure is defined as "the basic physical and organizational structures needed for the operation of a society or enterprise or the services and facilities." In regards to Cutler-Orosi, this Community Plan is intended to address deficiencies and the need for improvements to the drinking water system improvements, wells, water distribution piping and storage tanks, curbs, gutters, streets, sidewalks, etc.

Sustainable Groundwater Management Act SGMA

On September 16, 2014, governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA). The SGMA provides local governments and stakeholders the time needed to implement the complex law. Completion of plans in critically over drafted basins timeframe is January 31, 2020, and high- and medium-priority basins achieve sustainability 20-years after adoption of their plan (2040).

Groundwater Sustainability Agency (GSA)

The Cutler Public Utility District (CPUD) and the Orosi Public Utility District (OPUD) are located within the Kings River East Groundwater Sustainability Agency (GSA).

Surface Water

"There is no natural surface water supply in the vicinity of the CPUD or the OPUD. A surface

water supply for domestic purposes will have to be transported to the area through Alta Irrigation District's open channels, the Friant-Kern Canal, a dedicated pipeline or a combination of all three. The Alta Irrigation District surface water supply originates in the Kings River watershed, with their headgate on the Kings River being located downstream of Piedra. Storage of their water supply is provided by Pine Flat Dam."[27]

Ground Water

"The CPUD and the OPUD presently rely entirely on groundwater for domestic water supply purposes."[28]

Domestic Water and Wastewater

In May 3, 2006, by Resolution 06-021, Tulare County Local Agency Formation Commission (LAFCO) adopted the Cutler Public Utility District (CPUD) and Orosi Public Utility District (OPUD) Municipal Service Review (MSR). The agencies in Tulare County were divided into three (3) categories: agencies subject to a full comprehensive study; agencies subject to a questionnaire study; and agencies exempt from a MSR study. The Cutler Public Utility District (CPUD) and Orosi Public Utility District (OPUD) was subject to a full comprehensive study.

"The Orosi Public Utility District (OPUD) and the Cutler Public Utility District (CPUD) provide domestic water to the residents of the unincorporated communities of Orosi and Cutler, respectively.
Each district relies solely on groundwater to meet the water demands of its customers. OPUD presently utilizes four wells and CPUD utilizes two active wells."[29]

"Currently, each district has sufficient water supply to meet existing water demands."

Table 23 - Description of Existing Infrastructure

Community	Drinking Water			Waste Water*		
	No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
Cutler	1,032	1,032	0	1,255	1,255	0
Orosi	1,788	3,788	2,000	2,162	2,162	0

*** Tulare County Housing Element Action Program 9, Data current as of May 2012**

Cutler Public Utility District (CPUD)

"CPUD has a total of four developed wells. Two of the wells are active and two of the wells are inactive at this time **(see Figure 14)**. The two inactive wells (Well Nos. 3 and 4) were taken out of

[27] Water Supply Study Cutler-Orosi Area, Dennis R. Keller/James H. Wegley, Consulting Civil Engineers, February 2007, page 4-9.
[28] Ibid page 4-1
[29] Water Supply Study Cutler – Orosi Area, February 2007, Dennis R. Keller/James H. Wegly, Consulting Civil Engineers.

service because water test results exceeded the Maximum Contaminant Level (MCL) limit of nitrates. Well Nos. 5 and 6 are the two active wells that supply water for the community."[30]

"There is a well within CPUD (Well No. 7) that is not owned by CPUD. The well is owned by the Tulare County Redevelopment Agency and is used for fire flow at a local industry. Well No. 8 was completed in April 2006. Water quality testing; however, has revealed high nitrate concentrations approaching the MCL. Future use of Wells No. 8 is uncertain. Well No. 9 was drilled on the site for a proposed blending tank facility for CPUD. The well facility, when completed, will allow for water from Well Nos. 3 and 4 to be used in combination with flows from Well No. 5 and Well No. 9. The availability of sufficient quantities of low nitrate concentration water from CPUD's wells is uncertain."[31]

"The CPUD utilizes one elevated water storage tank for water system storage and pressure. The tank holds 50,000 gallons. The tank is connected to the distribution system by a common fill inlet and outlet configuration."[32]

"The CPUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of 2,930 GPM, or 4.22 MGD."[33]

The CPUD water system **(see Table 23) s**upports 1,032 total connections including three industry-packing houses, and one box plant. Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is concluded that the District's water system is currently operating at or near its capacity, and cannot support additional connections at this time.

The amount of developable land available, including the availability of infrastructure, are two factors that have limited community growth from occurring, including affordable housing objectives, and commercial enterprise.

Currently, the District charges a flat rate for water service in the community. The District should consider installing water meters on all connections to their water system.

"Lovell High School, which is operated by the Cutler-Orosi Joint Unified School District, has requested water capacity from the Cutler PUD. The PUD plans to provide the school with water service pending the approval and implementation of the blending tank project. The school is located at the northwest quadrant of Avenue 392 and State Route 63, which is currently outside of the Cutler PUD boundary and sphere of influence (SOI). It is anticipated that the PUD would provide water service to the school on a contractual basis".[34]

[30] Water Supply Study Cutler – Orosi Area, February 2007, Dennis R. Keller/James H. Wegly, Consulting Civil Engineers page 2-2.
[31] Ibid. page 2-2
[32] Ibid. page 2-3.
[33] Tulare County Housing Element – Action Program 9, page 2-2.
[34] Tulare County LAFCO Group 2 Municipal Service Reviews, page 3-2.

Orosi Public Utility District (OPUD)

The Orosi PUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of approximately 2,930 GPM, or 4.22 MGD. The District also has a water storage tank with a capacity of approximately 750,000 gallons **(see Table 23)**.

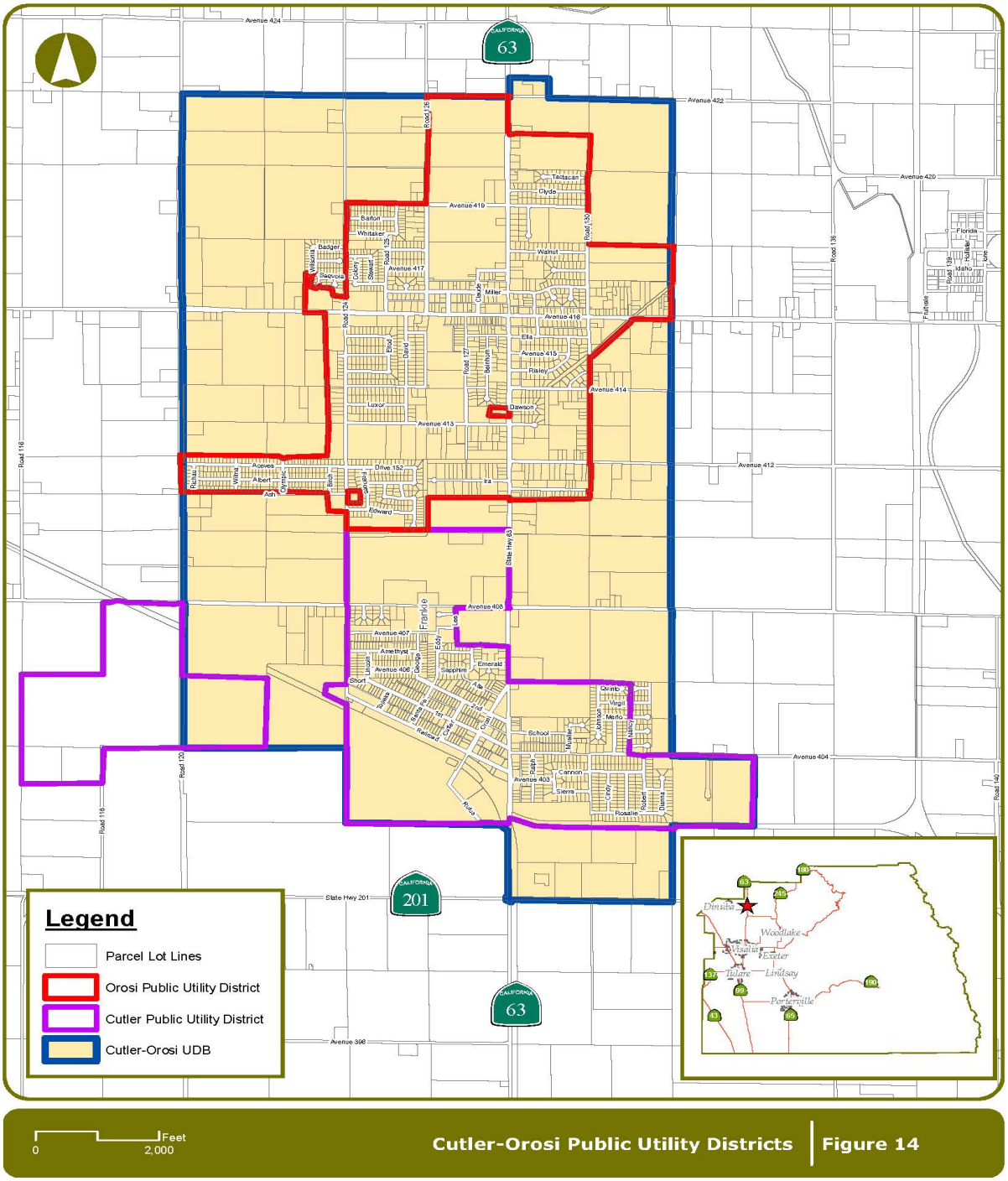
"OPUD has a total of six developed wells."[35] "Four of the wells are active and two of the wells are inactive at this time. Well No. 6 is inactive and was taken out of service because water test results exceeded the MCL limit for nitrates. Well No. 9 is also considered inactive due to high nitrates and is not connected to the system because of a development dispute. Wells Nos. 4, 5A, 7, and 8 are the four active wells that supply water for the community."[36]

"OPUD has one ground level water storage tank and four hydropneumatic tanks that also provide some limited water storage. The ground level tank has a capacity of 750,000 gallons and delivers water to the system through two booster pumps located at the site of Well No. 5A. There is a 10,000 gallon hydropneumatic tank at each of the active wells. OPUD's water supply and distribution system is shown on Figure 2-3 [in the Water Supply Study 2007]."[37]

"The Orosi PUD water system supports 1,788 total connections to their water system including 1,639 residential connections, 132 commercial connections, 3 agricultural connections, and 14 connections, which are inactive."[38]

[35] Water Supply Study Cutler – Orosi Area, February 2007, Dennis R. Keller/James H. Wegly, Consulting Civil Engineers, page 2-4
[36]. Ibid.
[37] Op. Cit.. 2-5
[38] Tulare County LAFCO Group 2 Municipal Service Reviews, page 4-1

Figure 15 - Inventory of Water Service in Cuter/Orosi



Sanitary Sewer

In March 1980, the Cutler Public Utility District entered into the Joint Wastewater Treatment and Disposal Facilities Agreement with the Orosi Public Utility District, forming the Cutler-Orosi Joint Power Wastewater Authority for the purpose of operating a wastewater treatment and disposal facility. Under the terms of the Agreement, which expires July 1, 2022, the Cutler Public Utility District owns 50 percent of the property and 40 percent of the plant and equipment of Authority. The Orosi Public Utility District owns 50 percent of the property and 60 percent of the plant and equipment of the Authority.

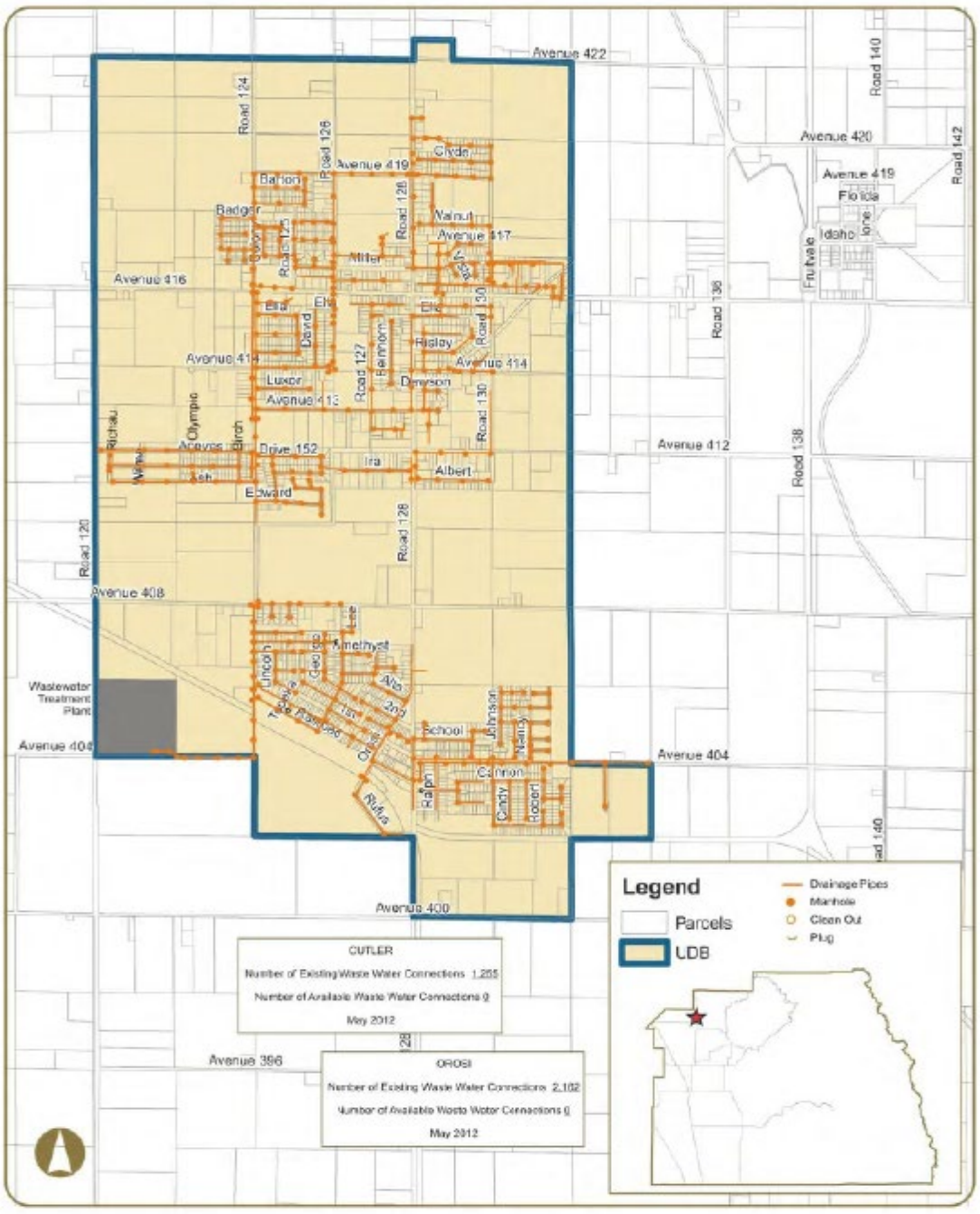
Figure 15 "graphically displays the approximate location of the sewer system and wastewater treatment plant. The Cutler PUD is currently allocated 1,255 equivalent dwelling units of capacity at the Cutler-Orosi Wastewater Treatment Facility (WWTF). The Orosi PUD is currently allocated 2,162 equivalent dwelling units of capacity at the WWTF. The Cuter and Orosi PUDs are currently under a building moratorium, and have waiting lists for additional sewer connections.

According to Cutler-Orosi PUD staff, the sanitary sewer collection system is very old and pipe leaks and breaks cause significant problems including groundwater inflow/infiltration and cross contamination with groundwater. The Orosi PUD is implementing a phased sewer collection system rehabilitation/replacement project, and has awarded a contract for the construction of the phase 1 improvements.

Treatment and disposal of the collected effluent is provided at the Cutler-Orosi WWTF, jointly owned and operated by the Cutler PUD and Orosi PUD. The Cutler-Orosi WWTF serves the communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana. It operates under the provisions of Waste Discharge Requirements (WDR) Order No. 97-106, issued by the California Regional Water Quality Control Board (RWQCB). The average dry weather flow at the WWTF is approximately 1.40 MGD, with a historical high flow of 1.89 MGD. Flow at the WWTF is greater during winter months than in summer months due to inflow/infiltration of storm water into the collection system during winter months, and ex-filtration during dry summer months. The PUDs will be able to more accurately predict the remaining capacity at the WWTF once repairs are made to leaking pipes throughout the collection system.

The Cutler PUD and Orosi PUD are working with Tulare County to secure funding that will be used to correct deficiencies that would increase the capacity of the WWTF. Proposed improvements will modernize the facility and add capacity to bring the serviceable operational limits to 2.4 MGD.

Figure 16 - Inventory of Sewer Service for Cutler-Orosi



Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drainpipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 24 identifies the location of drainage inlets and sumps in Cutler-Orosi.

Table 24 - Location of Existing Storm Drainage Facilities

No.	East-West Roadway	North-South Roadway	Type
1	1st Drive	Road 124	Inlet
2	1st Drive	Topeka Drive	Inlet
3	1st Drive	Santa Fe Drive	Inlet
4	1st Drive	Cutler Drive	Inlet
5	1st Drive	Orosi Drive	Inlet
6	1st Drive	Road 128	Inlet
7	2nd Drive	Eddy Avenue	Inlet
8	2nd Drive	Road 128	Inlet
9	Amethyst Avenue	Lincoln Road	Inlet
10	Amethyst Avenue	George Road	Inlet
11	Amethyst Avenue	Eddy Avenue	Inlet
12	Avenue 404	Road 128	Inlet
13	Avenue 404	Mueller Road	Inlet
14	Avenue 404	Road 130	Inlet
15	Avenue 406	Eddy Avenue	Inlet
16	Avenue 406	Alta Drive	Inlet
17	Avenue 407	Road 124	Inlet
18	Avenue 413	David Road	Sump
19	Avenue 413	Road 127	Inlet
20	Avenue	East 413of Road 128	Inlet
21	Avenue 414	David Road	Sump

Table 24 - Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
22	Avenue 414	Road 127	Sump
23	Avenue 414	East of Road 128	Inlet
24	Avenue 414	Road 128	Inlet
25	Avenue 414	Sand Creek	Inlet
26	Avenue 414	Road 130	Inlet
27	Avenue 415	East of Road 128	Inlet
28	Avenue 416	Road 124	Inlet
29	Avenue 416	Road 125	Inlet
30	Avenue 416	David Road	Inlet
31	Avenue 416	Road 126	Inlet
32	Avenue 416	Eddy Road	Inlet
33	Avenue 416	Claude Road	Inlet
34	Avenue 416	Road 130	Inlet
35	Avenue 417	Claude Road	Sump
36	Avenue 419	Between Ralph Rd and Road 130	Sump
37	Cannon Avenue	East of Road 130	Inlet
38	Dawson Avenue	East of Road 128	Inlet
39	Ella Avenue	David Road	Sump
40	Ella Avenue	East of Road 128	Inlet
41	Ella Avenue	Road 130	Inlet
42	Emerald Avenue	Road 127	Inlet
43	Ira Avenue	West end	Sump
44	Luxor Avenue	Road 124	Inlet
45	Miller Avenue	Road 125	Sump
46	Miller Avenue	Eddy Road	Sump
47	Miller Avenue	Claude Road	Sump
48	Railroad Drive	Road 124	Inlet
49	Railroad Drive	Topeka Drive	Sump
50	Railroad Drive	Santa Fe Drive	Sump
51	Railroad Drive	Between Santa Fe Drive and Cutler Drive	Inlet
52	Railroad Drive	Cutler Drive	Sump
53	Railroad Drive	Orosi Drive	Sump
54	Risley Avenue	Road 124	Inlet
55	Risley Avenue	East of Road 128	Inlet
56	Rosalie Avenue	Road 130	Inlet
57	Rosalie Avenue	Nancy Road	Inlet
58	Sierra Avenue	Road 128	Inlet
59	South of Avenue 408	Lincoln Road	Inlet
60	South of Avenue 408	Topeka Road	Inlet
61	Walnut Avenue	Road 128	Sump

Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

Solid Waste

Pena's Disposal, a private company, provides solid waste disposal services for the Community of

Cutler-Orosi. Solid waste generated in Cutler-Orosi can be disposed of at the Visalia Landfill (located at 22466 Road 80, Visalia, California).

Energy Natural Gas/Electricity

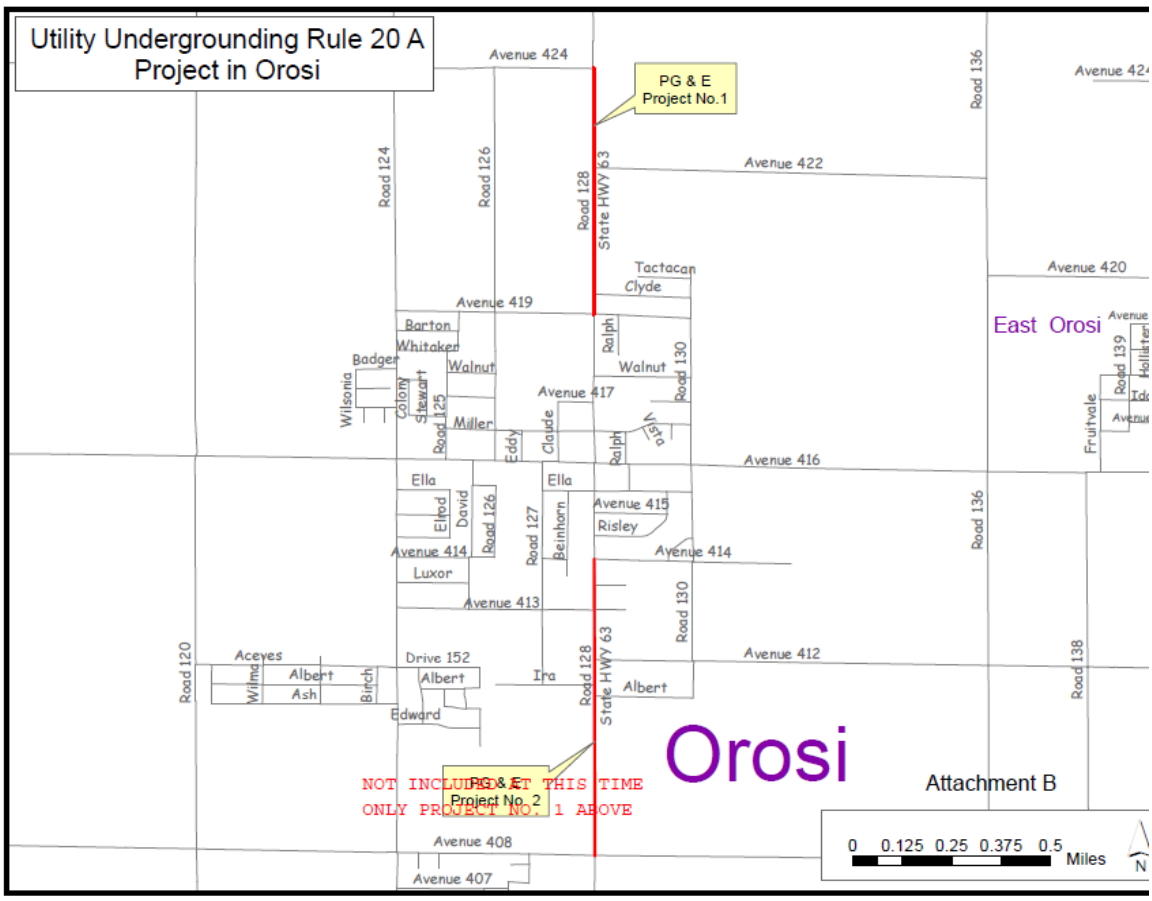
Pacific Gas & Electric (PGE) provides electrical and gas power in Cutler-Orosi.

Undergrounding Electricity (Rule 20A)

The California Public Utilities Commission (CPUC) Rule 20 includes policies and procedures for the undergrounding of overhead power lines. Utility ratepayers for projects of public benefit fund rule 20A projects.

Southern California Edison has one proposed Rule 20A project in Orosi **(see Figure 16)**: State Route 63 (Road 128) from Avenue 419 to Avenue 424. The Board of Supervisors will consider the formation of an underground utility district for this project.

Figure 17 - Rule 20A Utility Underground Districts in Orosi



Public Services

Tulare County Sheriff

Police protection services are provided in Cutler-Orosi by the Tulare County Sheriff's Department sub-station, located at 12800 Avenue 416, in Orosi. The Substation covers approximately 289 square miles serving a rural population to include the unincorporated communities of Cutler, East Orosi, Orosi, Seville, Sultana, Traver and Yettem. The Substation runs a four-shift operation, which includes 23 deputies, four (4) sergeants and one (1) lieutenant. There are a minimum of three deputies and one sergeant in the field at all times. In addition, general shift staffing the communities of Cutler-Orosi are assigned a Community Based Officer assigned specifically to those areas. The substation is open for walk-ins from 8:00 am to 5:00 pm Monday thru Friday. After hours and weekends there is a phone provided outside the substation that calls directly into the dispatch center. The substation provides patrol services 24-hours per day, 365 days per year. Additional Sheriff Resources are available as needed via dispatch from the main Sheriff's Office in Visalia, CA.

Tulare County Fire Department

The Tulare County Fire Department provides fire protection and emergency medical services for Cutler-Orosi. Tulare County Fire Station #4 is located at 40779 Road 128, Cutler-Orosi Fire Station. Cutler-Orosi Fire Station has Patrol 4, Engine 4, and Engine 204 assigned to this location. Paid On-Call Fire Fighters are assigned to this Station and they respond when called out to an incident.

There are 267 fire hydrants found within Cutler-Orosi **(see Table 25)**. These fire hydrants are located within the County rights-of-way. **Figure 17** display Existing Fire Hydrants in Cutler-Orosi

Table 25: Existing Fire Hydrants Cutler-Orosi

No.	Location		
1	Avenue 422 west of Road 128	134	Avenue 413 east of Road 128
2	Road 128 south of Avenue 422	135	Dawson Avenue east of Road 128
3	Road 128 south of Avenue 422	136	Dawson Avenue east of Road 128
4	Orosi Mobile Home Estates east of Road 128	137	Beinhorn Road south of Avenue 414
5	Orosi Mobile Home Estates east of Road 128	138	Beinhorn Road south of Avenue 414
6	Orosi Mobile Home Estates east of Road 128	139	Road 127 north of Avenue 413
7	Orosi Mobile Home Estates east of Road 128	140	Avenue 413 and Road 127
8	Orosi Mobile Home Estates east of Road 128	141	Avenue 413 east of Road 127
9	Road 128 north of Clyde Avenue	142	Avenue 413 east of Road 127
10	Tactacan Avenue west of Road 130	143	Avenue 414 east of Road 124
11	Tactacan Avenue and Road 130	144	Road 124 south of Avenue 414
12	Tactacan Avenue west of Road 130	145	David Road south of Avenue 414
13	Clyde Avenue and Road 130	146	Road 124 south of Luxor Avenue
14	Road 130 south of Clyde Avenue	147	Avenue 413 east of Road 124
15	Clyde Avenue west of Road 130	148	David Road south of Luxor Avenue
16	Clyde Avenue east of Road 128	149	Avenue 413 east of David Road
17	Avenue 419 east of Ralph Road	150	Avenue 413 east of David Road
18	Road 128 south of Avenue 419	151	Avenue 413 east of David Road
19	Road 126 north of Avenue 419	152	Ira Avenue and Road 127
20	Avenue 419 west of Road 126	153	Ira Avenue west of Road 127
21	Avenue 419 west of Van Tassel Road	154	David Road and Aceves avenue
22	Avenue 419 west of Van Tassel Road	155	Edward Avenue east of Road 124
23	Avenue 419 east of Road 124	156	Edward Avenue east of Road 124
24	Road 124 north of Barton Avenue	157	Edward Avenue east of Road 124
25	Road 124 and Barton Avenue	158	Road 124 north of Edward Avenue
26	Road 124 south of Barton Avenue	160	Aceves Avenue west of David Road
27	Barton Avenue east of Road 124	161	Albert Avenue east of Frances Road

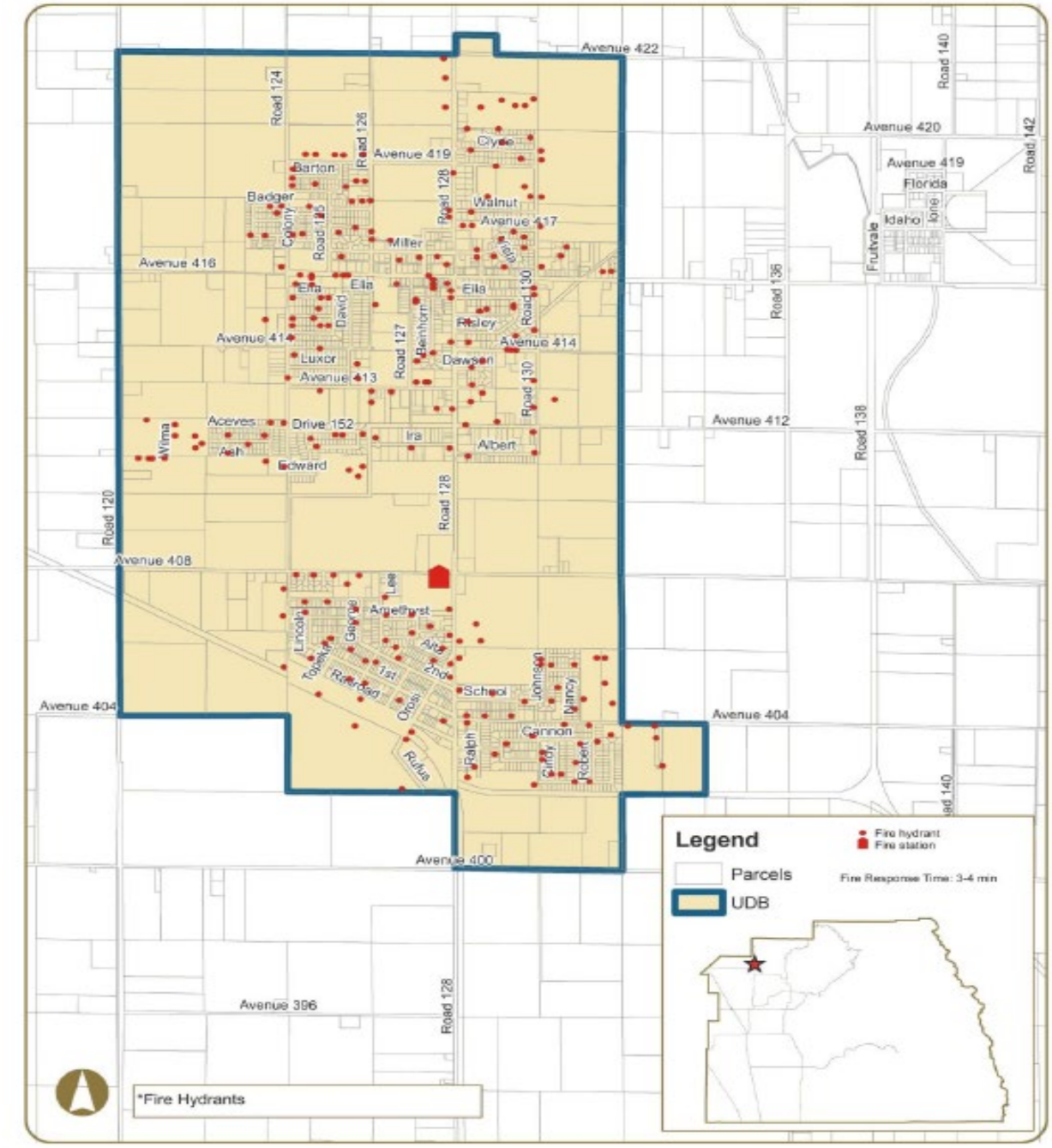
Table 25: Existing Fire Hydrants Cutler-Orosi			
28	Van Tassel Road south of Barton Avenue	162	Frances Road south of Aceves Avenue
29	Road 126 south of Avenue 419	163	Aceves Avenue and Road 124
30	Road 126 south of Avenue 419	164	Aceves Avenue and Birch Road
31	Road 126 north of Walnut Avenue	165	Birch Road south of Aceves Avenue
32	Road 126 north of Walnut Avenue	166	Ash Avenue and Birch Road
33	Road 126 north of Walnut Avenue	167	Albert Avenue west of Birch Road
34	Ralph Road south of Avenue 419	168	Ash Avenue east of Olympic Street
35	Road 130 north of Walnut Avenue	169	Olympic Street south of Aceves Avenue
36	Road 130 north of Walnut Avenue	170	Albert Avenue and Olympic Street
37	Road 130 north of Walnut Avenue	171	Albert Avenue west of Olympic Street
38	Walnut Avenue east of Road 128	172	Albert Avenue west of Olympic Street
39	Walnut Avenue and Road 128	173	Albert Avenue and Wilma Road
40	Road 128 south of Walnut Avenue	174	Aceves Avenue and Wilma Road
41	Road 125 south of Walnut Avenue	175	Ash Avenue west of Wilma Road
42	Dennison Drive west of Stewart Street	176	Ash Avenue west of Wilma Road
43	Colony Street north of Buenna Vista Avenue	177	Ash Avenue east of Richau Street
44	Colony Street north of Buenna Vista Avenue	178	Ash Avenue east of Richau Street
45	Badger Avenue and Road 124	179	Aceves Avenue east of Richau Street
46	Badger Avenue west of Road 124	180	Avenue 408 and Road 124
47	Road 124 south of Badger Avenue	181	Avenue 408 east of Lincoln Road
48	Sequoia Avenue and Granite Court	182	Avenue 408 east of Topeka Road
49	Sequoia Avenue and Wilsonia Avenue	183	Avenue 408 east of Topeka Road
50	Avenue 417 east of Road 125	184	Avenue 408 east of Topeka Road
51	Avenue 417 west of Road 126	185	Road 124 south of Avenue 408
52	Avenue 417 and Road 126	186	Avenue 407 and Eddy Road
53	Road 126 south of Avenue 417	187	Avenue 407 east of Road 124
54	Miller Avenue east of Road 126	188	Avenue 407 east of Road 124
55	Road 128 south of Walnut Avenue	189	George Road south of Avenue 407
56	Road 128 south of Walnut Avenue	190	George Road south of Amethyst Avenue
57	Road 130 and Avenue 417	191	Amethyst Avenue west of Lincoln Road
58	Avenue 417 west of Road 130	192	Road 124 and Amethyst Avenue
59	Avenue 417 west of Road 130	193	Amethyst Avenue and Eddy Road
60	Avenue 417 west of Road 130	194	Amethyst Avenue and Road 127
61	Avenue 416 east of Road 130	195	Road 128 south of Avenue 408
62	Avenue 416 east of Road 130	196	Emerald Avenue and Road 128
63	Road 130 north of Avenue 416	197	Emerald Avenue east of Road 127
64	Miller Road east of Road 130	198	Avenue 406 and Road 127
65	Miller Road east of Road 130	199	Road 128 north of Emerald Avenue
66	Miller Road and Pacifica Court	200	Road 128 south of Emerald Avenue

Table 25: Existing Fire Hydrants Cutler-Orosi			
67	Miller Road and Vista Court	201	Road 128 south of Emerald Avenue
68	Lincoln Road north of Avenue 416	202	Avenue 406 and Eddy Road
69	Miller Avenue and Ralph Road	203	Avenue 406 west of George Road
70	Miller Avenue and Ralph Road	204	Avenue 406 west of George Road
71	Road 128 north of Avenue 416	205	George Road south of Avenue 406
72	Miller Avenue west of Road 128	206	Topeka Drive south of 1st Drive
73	Miller Avenue and Claude Road	207	Road 124 south of Railroad Drive
74	Eddy Road south of Miller Avenue	208	Road 128 north of Alta Drive
75	Miller Avenue east of Road 125	209	Orosi Drive and Road 128
76	Avenue 416 and Road 124	210	Orosi Drive south of Road 128
77	Avenue 416 east of Road 124	211	Road 128 north of 2nd Drive
78	Avenue 416 east of Road 124	212	Alta Drive west of Orosi Drive
79	Avenue 416 east of Road 124	213	2nd Drive west of Cutler Drive
80	Avenue 416 east of Road 124	214	Eddy Road north of 2nd Drive
81	Road 124 south of Avenue 416	215	Santa Fe Drive south of 2nd Drive
82	Avenue 416 east of Road 125	216	Santa Fe Drive south of 2nd Drive
83	Avenue 416 east of Road 125	217	Santa Fe Drive south of 1st Drive
84	Avenue 416 east of Road 125	218	Santa Fe Drive south of 1st Drive
85	Road 126 south of Ella Avenue	219	Railroad Drive east of Santa Fe Drive
86	Ella Avenue and Road 124	220	Road 124 south of Railroad Drive
87	Ella Avenue east of Road 124	221	Cutler Drive south of 1st Drive
88	Ella Avenue west of Elrod Road	222	Railroad Drive east of Santa Fe Drive
89	Avenue 415 west of Elrod Road	223	Orosi Drive south of Railroad Drive
90	Avenue 415 west of Elrod Road	224	Orosi Drive south of Railroad Drive
91	Elrod Road south of Avenue 415	225	Avenue 402 west of Road 128
92	Risley Avenue west of Elrod Road	226	2nd Drive and Road 128
93	Avenue 415 and Road 124	227	Road 128 south of 1st Drive
94	Road 124 north of Risley Avenue	228	School Avenue east of Road 128
95	Road 124 south of Risley Avenue	229	Quinto Court and Johnston Road
96	Road 124 south of Avenue 415	230	Virgil Avenue and Johnston Road
97	Avenue 416 east of Eddy Road	231	Virgil Avenue and Johnston Road
98	Road 127 and Ella Avenue	232	Virgil Avenue west of Nancy Road
99	Road 127 and Ella Avenue	233	Robert Road south of Rivera Court
100	Avenue 416 and Claude Road	234	Robert Road south of Rivera Court
101	Avenue 416 east of Claude Road	235	Merlo Court east of Nancy Road
102	Avenue 416 east of Claude Road	236	Merlo Avenue and Cindy Road
103	Avenue 416 east of Claude Road	237	Johnston Road south of Merlo Avenue
104	Road 128 south of Avenue 416	238	School Avenue and Mueller Road
105	Road 128 south of Avenue 416	239	Antonia Avenue and Nancy Road
106	Ella Avenue at Road 128	240	Kahlo Court and Nancy Road
107	Road 130 south of Avenue 416	241	Kahlo Court east of Nancy Road
108	Ella Avenue and Road 130	242	Avenue 404 east of Road 128

Table 25: Existing Fire Hydrants Cutler-Orosi			
109	Mueller Road south of Ella Avenue	243	Avenue 404 east of Road 128
110	Mueller Road south of Ella Avenue	244	Avenue 404 and Ralph Road
111	Avenue 415 east of Road 128	245	Avenue 404 and Mueller Road
112	Avenue 415 east of Road 128	246	Avenue 404 and Cindy Road
113	Avenue 415 east of Road 128	247	Avenue 404 and Robert Road
114	Ledbetter Drive and Road 130	248	Avenue 404 east of Robert Road
115	Ledbetter Drive west of Road 130	249	Avenue 404 east of Robert Road
116	Avenue 414 west of Road 130	250	Private Dwy east of Robert Road south of Avenue 404
117	Avenue 415 and Ledbetter Drive	251	Private Dwy east of Robert Road south of Avenue 404
118	Avenue 415 west of Ledbetter Drive	252	Dianna Road north of Sierra Avenue
119	Avenue 414 east of Road 128	253	Cannon Avenue and Robert Road
120	Road 128 north of Avenue 414	254	Cannon Avenue and Nancy Road
121	Road 130 south of Avenue 414	255	Nancy Road south of Cannon Avenue
122	Road 130 north of Avenue 412	256	Rosalie Avenue and Nancy Road
123	Road 130 north of Avenue 412	257	Rosalie Avenue and Robert Road
124	Avenue 412 and Road 130	258	Cindy Road north of Rosalie Avenue
125	Albert Avenue and Road 130	259	Cindy Road north of Rosalie Avenue
126	Avenue 412 west of Road 130	260	Rosalie Avenue and Road 130
127	Albert Avenue east of Road 128	261	Sierra Avenue and Road 130
128	Albert Avenue and Road 128	262	Road 130 north of Sierra Avenue
129	Avenue 412 east of Road 128	263	Cannon Avenue and Road 130
130	Road 128 north of Avenue 412	264	Cannon Avenue north of Sierra Avenue
131	Road 128 north of Avenue 412	265	Sierra Avenue and Cannon Avenue
132	Road 128 south of Avenue 413	266	Ralph Road south of Avenue 403
133	Avenue 413 east of Road 128	267	Ralph Road south of Avenue 403

Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

Figure 18 - Inventory of Fire Infrastructure in Cutler-Orosi



Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

Schools

The Cutler-Orosi Community Plan Area is within the Cutler-Orosi Joint Unified School District located within its boundaries. It offers pre-school through 12th grade education and has a 2019-2020 enrollment of 4,123 students **(see Table 26)**. School enrollment has been variable since 2000. According to records from the California Department of Education, enrollment in the Cutler-Orosi Joint Unified School District in 2019-20[39], of these students approximately 3,936 are Hispanic, 9 are Asian, 73 are White, 48 are African American, 2 are Two or More Races, 5 are American Indian or Alaska Native, 119 are Filipino, and 2 are Pacific Islander. One hundred percent of the students participate in the Free or Reduced Price Meal (FRPM).

Table 26 - Cutler-Orosi Joint Unified - Student Enrollment 2000-2017

Year	Enrollment	Change
2000-2001	3,844	
2001-2001	3,914	+70
2002-2003	3,981	+7
2003-2004	4,017	+36
2004-2005	4,026	+9
2005-2006	4,058	+32
2006-2007	4,023	-35
2007-2008	4,062	+39
2008-2009	4,128	+66
2009-2010	4,162	+34
2010-2011	4,178	+16
2011-2012	4,133	-45
2012-2013	4,128	-5
2013-2014	4,114	-14
2014-2015	4,083	-14
2015-2016	4,095	+12
2016-2017	4,126	+31
2017-2018	4,125	-1
2018-2019	4,151	+26
2019-2020	4,123	-28

California Department of Education

[39] California Department of Education, Data enrollment, https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=5471860&agglevel=district&year=2019-20

Family Education Center

The Family Resource Center (FRC) is located at the Family Education Center, 40802 Road 128 in Orosi, California, on the northeast corner of SR 63 and Avenue 408. This location places the FRC halfway between Cutler-Orosi, with a Tulare County Area Transit stop directly in from of the FRC. Anyone living within the Cutler-Orosi school district boundaries may be eligible to receive resource and referral services.

Their ultimate goals are to support families, meet individual needs, build upon strengths, share responsibility, and engage the community in efforts to create safe, nurturing environments for Cutler-Orosi community children to grow and learn.

Libraries

"The Tulare County Public Library System is comprised of interdependent branches, grouped by services, geography and usage patterns to provide efficient and economical services to the residents of the county. At present, there are 14 regional libraries and one main branch."[40] The closest library is located in Orosi **(see Table 27)**.

Table 27 - Library Location & Hours

Branch	Address	Service Hours (2003)
Orosi	Orosi Branch 12646 Avenue 416 Orosi, CA 93647	Wednesday, Thursday, and Friday 9:00 a.m. – 1:00 p.m. 2:00 p.m. – 6:00 p.m.

Library hours current as of April 2019

Parks

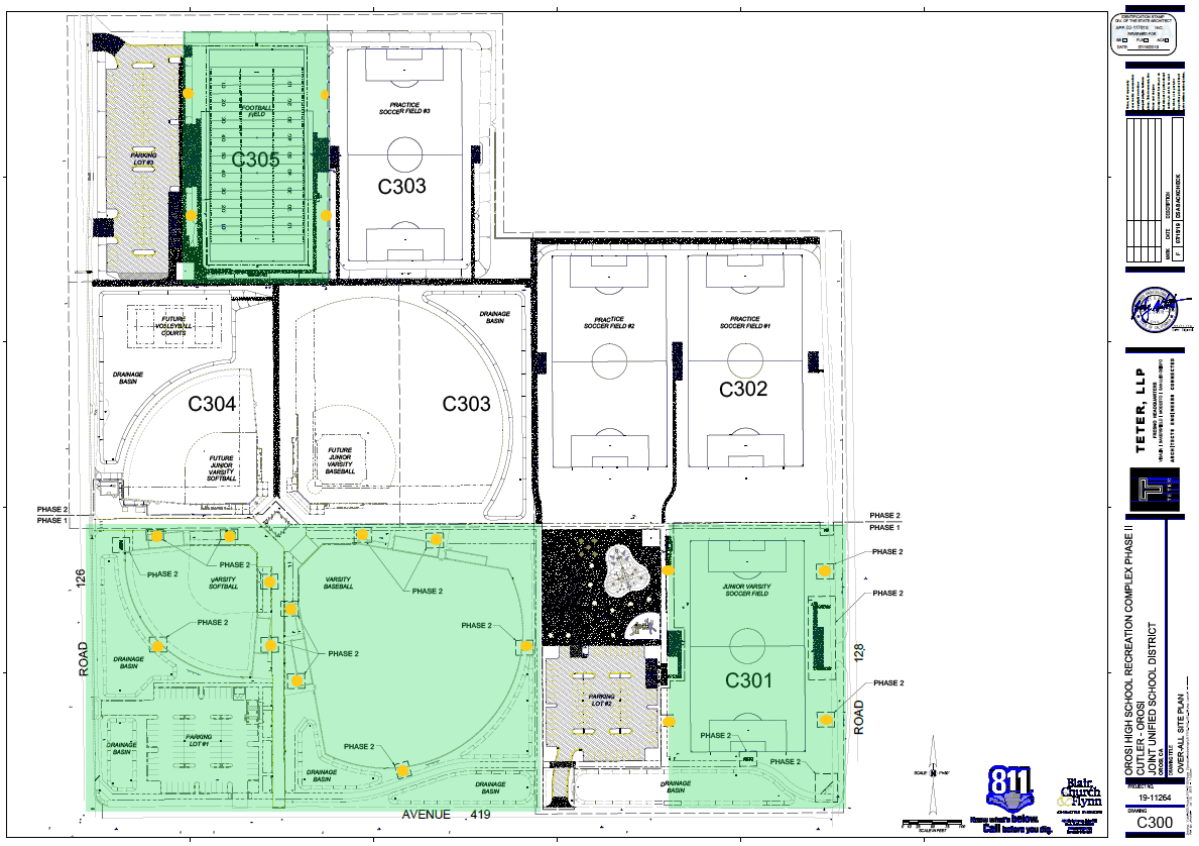
Cutler-Orosi's nearest park is Ledbetter Park located at 40779 Road 124 in Cutler, California.

The Cutler-Orosi Joint Unified School District has been in the process of developing the Orosi High School Recreation Complex (approximately 32-acres) located at 41815 Road 128 in Orosi, California. Phase I currently contains football, soccer, baseball, and softball fields that were constructed in the spring/summer of 2019.

The Orosi High School Recreation Complex Phase II proposes the installation of 19 light standards within the previously developed recreational complex area in Orosi, California. Eight 70-foot light standards would be installed around the existing football field and junior varsity soccer field, six 60- to 80-foot light standards would be installed around the existing baseball field, and five 60- to 70 foot light standards would be installed around the existing softball field **(see Figure 18)**.

[40] General Plan Background Report, page 7-96

Figure 19 Orosi High School Recreation Sports Park



Roads

Road Conditions

There are various roadways in Cutler-Orosi that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt, then immediately covered with aggregate, and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads.

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways.
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware.
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt.
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads.

Table 28 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. **Figure 19** graphically displays this information on a map.

Table 28 - Road Maintenance Strategies

No.	Roadway	Limits	Repair Code
1	Aceves Avenue	Road 124 to David Road	OLAY
2	Albert Avenue	Road 128 to Road 130	CHIP
3	Albert Avenue	Frances Road to David Road	CHIP
4	Alta Drive	Orosi Drive to Avenue 406	CHIP
5	Amethyst Avenue	Road 124 to George Road	CHIP
6	Amethyst Avenue	Eddy Road to Road 127	CHIP
7	Avenue 403	Robert Road to Dianna Road	OLAY
8	Avenue 404	Road 128 to Cindy Road	GRX
9	Avenue 404	Cindy Road to Nancy Road	OLAY
10	Avenue 404	Nancy Road to Robert Road	GRX
11	Avenue 406	Lincoln Road to George Road	CHIP
12	Avenue 406	Eddy Road to Road 127	CHIP
13	Avenue 408	Topeka Road to Lee Road	GRX
14	Avenue 413	Road 124 to Road 128	CHIP
15	Avenue 413	Road 128 to East end	OLAY
16	Avenue 414	Road 127 to Beinhorn Road	CHIP
17	Avenue 415	Road 124 to Elrod Road	OLAY
18	Avenue 415	Road 128 to Mueller Road	CHIP
19	Avenue 417	Road 130 to West end	CHIP
20	Avenue 419	Road 128 to Road 130	CHIP
21	Badger Avenue	Wilsonia Avenue to Road 124	CHIP
22	Barton Avenue	Road 124 to Van Tassel Road	CHIP
23	Beinhorn Road	Avenue 414 to South end	OLAY
24	Beinhorn Road	Avenue 414 to Ella Avenue	CHIP
25	Buena Vista Avenue	Colony Street to Road 125	CHIP
26	Cindy Road	Rosalie Avenue to Cannon Avenue	OLAY
27	Cindy Road	Avenue 404 to Merlo Avenue	CHIP
28	Clyde Avenue	Road 128 to Road 130	OLAY
29	David Road	Albert Avenue to Aceves Avenue	CHIP
30	Dawson Avenue	Road 128 to East end	CHIP

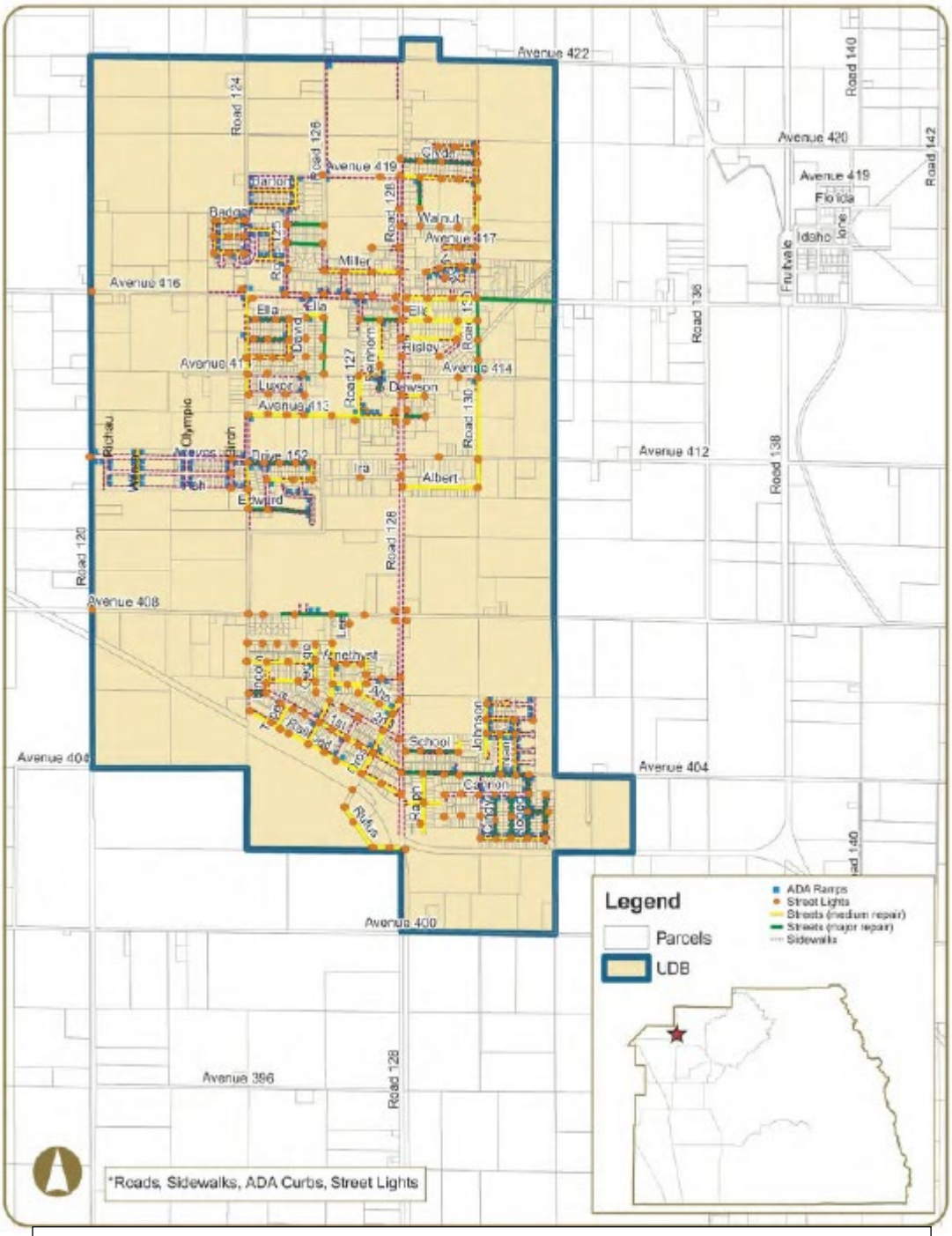
Table 28 - Road Maintenance Strategies			
31	Dennison Avenue	Road 124 to Stewart Street	CHIP
32	Dianna Road	Rosalie Avenue to North end	OLAY
33	Eddy Road	Santa Fe Drive to Avenue 407	CHIP
34	Edward Avenue	Road 124 to David Road	OLAY
35	El Monte Way	Road 128 to Road 130	CHIP
36	El Monte Way	Road 130 to Road 136	OLAY
37	El Monte Way	Elrod Road to Road 126	GRX
38	Ella Avenue	Road 124 to Elrod Road	OLAY
39	Ella Avenue	David Road to George Road	CHIP
40	Ella Avenue	Road 127 to Road 128	GRX
41	Ella Avenue	Road 128 to Road 130	CHIP
42	Elrod Road	Risley Avenue to Ella Avenue	CHIP
43	First Drive	Road 128 to Santa Fe Drive	CHIP
44	George Road	Second Street to Avenue 407	CHIP
45	Johnston Road	South end (Merlo Avenue) to North end (Quinto Court)	CHIP
46	Lincoln Road	First Drive to Amethyst Avenue	CHIP
47	Merlo Avenue	Johnston Road to Nancy Road	CHIP
48	Miller Avenue	Road 126 to Road 128	CHIP
49	Miller Avenue	Ralph Road to Road 130	CHIP
50	Mueller Road	School Avenue to North end	CHIP
51	Mueller Road	Avenue 415 to Ella Avenue	CHIP
52	Nancy Road	Rosalie Avenue to Cannon Avenue	OLAY
53	Nancy Road	Avenue 404 to Virgil Avenue	CHIP
54	Orosi Drive	Railroad Drive to Road 128	CHIP
55	Pacifica Court	Miller Avenue to South end	CHIP
56	Quinto Court	Johnston Road to East end	CHIP
57	Railroad Drive	Road 124 to Road 128	CHIP
58	Ralph Road	Avenue 404 to South end	CHIP
59	Ralph Road	Ella Avenue to El Monte Way	CHIP
60	Ralph Road	Avenue 419 to South end	OLAY
61	Risley Road	Road 124 to Elrod Road	CHIP
62	Road 124	Edward Avenue to Aceves Avenue	CHIP
63	Road 124	Luxor Avenue to El Monte Way	CHIP
64	Road 126	Avenue 414 to Ella Avenue	GRX
65	Road 127	Avenue 406 to North end	CHIP
66	Road 127	Avenue 413 to Avenue 414	CHIP
67	Road 130	Albert Avenue to Avenue 414	CHIP
68	Road 130	Avenue 414 to El Monte Way	GRX
69	Road 130	Walnut Avenue to North end	CHIP
70	Robert Road	Rosalie Avenue to Avenue 404	OLAY
71	Rosalie Avenue	Road 130 to Dianna Road	CHIP
72	Rufus Drive	Road 128 to Orosi Drive	CHIP
73	Santa Fe Drive	Railroad Drive to Second Drive	CHIP
74	School Avenue	Road 128 to Mueller Road	GRX
75	Sequoia Avenue	Wilsonia Avenue to Road 124	CHIP
76	Short Avenue	Road 124 to Lincoln Road	GRX

Table 28 - Road Maintenance Strategies			
77	Sierra Avenue	Road 128 to Road 129	CHIP
78	Stewart Street	Buena Vista Avenue to Dennison Avenue	CHIP
79	Tactacan Avenue	Road 130 to West end	CHIP
80	Topeka Drive	Railroad Drive to First Drive	CHIP
81	Twin Peaks Court	Wilsonia Avenue to East end	CHIP
82	Van Tassel Road	Whitaker Avenue to Avenue 419	CHIP
83	Virgil Avenue	Johnston Road to Nancy Road	CHIP
84	Walnut Avenue	Elrod Road to Road 126	GRX
85	Whitaker Avenue	Road 124 to Van Tassel Road	CHIP
86	Wilma Street	Ash Avenue to North end	CHIP
87	Wilsonia Avenue	Sequoia Avenue to Badger Avenue	CHIP

Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

OLAY = Overlay resurfacing operation
CHIP = Chip Seal
GRXx = Grind and remix
ACST = asphalt reconstruction
RCST = cold mix reconstruction

Figure 20 - Inventory of Roadway Facilities in Cutler-Orosi



Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48-inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. **Table 29** identifies the location of existing sidewalks in Cutler-Orosi. **Figure 19** also displays this information graphically. The sidewalks represented in **Table 29** and **Figure 19** do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non-ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

Table 29 - Location of Existing Sidewalks

No.	Roadway	Limits	Location
1	1st Drive	Lincoln Road to Cutler Drive	North side
2	1st Drive	150' east of Cutler Drive to 150' east of Orosi Drive	North side
3	1st Drive	Lincoln Road to Topeka Drive	South side
4	1st Drive	175' east of Topeka Drive to Santa Fe Drive	South side
5	1st Drive	75' east of Santa Fe Drive to Cutler Drive	South side
6	1st Drive	150' east of Cutler Drive to Road 128	South side
7	2nd Drive	175' east of Santa Fe Drive to Road 128	North side
8	2nd Drive	225' east of Santa Fe Drive to 150' east of Cutler Drive	South side
9	2nd Drive	Road 128 to 250' west	South side
10	Aceves Avenue	Road 120 to David Road	North side
11	Aceves Avenue	Road 120 to David Road	South side
12	Albert Avenue	Richau Street to Birch Road	North side
13	Albert Avenue	Richau Street to Birch Road	South side
14	Albert Avenue	Rancho Court to David Road	North side
15	Albert Avenue	Central Drive to David Road	South side
16	Alta Drive	250' west of Orosi Drive to 250' west	North side
17	Amethyst Avenue	150' west of Lincoln Road to 300' east of Lincoln Road	North side
18	Amethyst Avenue	George Road to 375' west	South side

Table 29 - Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
19	Amethyst Avenue	Eddy Avenue to 475' east	North side
20	Antonia Avenue	Nancy Road to east end	North side
21	Antonia Avenue	Nancy Road to east end	South side
22	Ash Avenue	Richau Street to Road 124	North side
23	Ash Avenue	Rancho Court to David Road	North side
24	Ash Avenue	Rancho Court to David Road	South side
25	Avenue 403	Ralph Road to 175' west	North side
26	Avenue 404	Road 128 to Robert Road	North side
27	Avenue 404	175' east of Ralph Road to Mueller Road	South side
28	Avenue 404	Road 130 to Robert Road	South side
29	Avenue 406	George Road to 275' west	North side
30	Avenue 408	Topeka Road to 450' east of Villa de Guadalupe	North side
31	Avenue 413	Road 127 to Road 128	North side
32	Avenue 413	Road 128 to east end	South side
33	Avenue 414	Road 124 to David Road	South side
34	Avenue 414	Road 127 to Beinhorn Road	North side
35	Avenue 414	Road 127 to Beinhorn Road	South side
36	Avenue 415	Road 124 to Elrod Road	North side
37	Avenue 415	Road 124 to Elrod Road	South side
38	Avenue 415	Mueller Road to 300' west	South side
39	Avenue 416	650' west of Road 124 to Road 124	North side
40	Avenue 416	Road 125 to Ella Avenue	North side
41	Avenue 416	Road 126 to Road 130	North side
42	Avenue 416	225' west of Road 124 to Road 128	South side
43	Avenue 417	Road 130 to west end	North side
44	Avenue 417	Road 130 to west end	South side
45	Avenue 419	Road 124 to Road 130	South side
46	Avenue 419	Ralph Road to Road 130	North side
47	Avenue 422	Road 126 to Road 128	South side
48	Badger Avenue	Wilsonia Avenue to Road 124	North side
49	Badger Avenue	Wilsonia Avenue to Road 124	South side
50	Barton Avenue	Road 124 to Van Tassel Road	North side
51	Barton Avenue	Road 124 to Van Tassel Road	South side
52	Beinhorn Road	South end to 575' north of Avenue 414	West side
53	Beinhorn Road	South end to 125' north of Avenue 414	East side
54	Beinhorn Road	Ella Avenue to 600' south	East side
55	Birch Road	Ash Avenue to Aceves Avenue	East side
56	Birch Road	Ash Avenue to Aceves Avenue	West side
57	Buenna Vista Avenue	Road 124 to Road 125	North side
58	Buenna Vista Avenue	Road 124 to Road 125	South side
59	Cannon Avenue	Sierra Avenue to Robert Road	North side

Table 29 - Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
60	Cannon Avenue	Sierra Avenue to Robert Road	South side
61	Central Drive	Albert Avenue to Ash Avenue	East side
62	Central Drive	Albert Avenue to Ash Avenue	West side
63	Cindy Road	Cannon Avenue to Rosalie Avenue	East side
64	Cindy Road	Cannon Avenue to Rosalie Avenue	West side
65	Cindy Road	Avenue 404 to Merlo Avenue	West side
66	Clyde Avenue	Road 128 to Road 130	North side
67	Clyde Avenue	Road 128 to Road 130	South side
68	Colony Street	Dennison Drive to Buenna Vista Avenue	East side
69	Colony Street	Dennison Drive to Buenna Vista Avenue	West side
70	Cutler Drive	Railroad Drive to 2nd Drive	West side
71	Cutler Drive	2nd Drive to 200' south	East side
72	David Road	Aceves Avenue to Albert Avenue	East side
73	David Road	Ash Avenue to south end	West side
74	David Road	Avenue 414 to Luxor Avenue	West side
75	David Road	Avenue 416 to 200' south	East side
76	David Road	Avenue 416 to 200' south	West side
77	Dennison Drive	Road 124 to Stewart Street	North side
78	Dennison Drive	Road 124 to Stewart Street	South side
79	Dianna Road	Rosalie Avenue to north end	East side
80	Dianna Road	Rosalie Avenue to north end	West side
81	Eddy Avenue	Amethyst Avenue to 200' south	East side
82	Eddy Avenue	Amethyst Avenue to 175' north	West side
83	Eddy Road	Miller Avenue to Avenue 416	East side
84	Eddy Road	Miller Avenue to Avenue 416	West side
85	Edward Avenue	Road 124 to David Road	South side
86	Edward Avenue	Frances Road to David Road	North side
87	Ella Avenue	Road 124 to Elrod Road	North side
88	Ella Avenue	Road 124 to Elrod Road	South side
89	Ella Avenue	Beinhorn Road to Road 128	South side
90	Elrod Road	Ella Avenue to Risley Avenue	East side
91	Elrod Road	Ella Avenue to Risley Avenue	West side
92	Emerald Avenue	Road 127 to Road 128	South side
93	Frances Road	Aceves Avenue to Edward Avenue	East side
94	Frances Road	Aceves Avenue to Edward Avenue	West side
95	George Road	Amethyst Avenue to Avenue 406	West side
96	Granite Court	Sequoia Avenue to south end	East side
97	Granite Court	Sequoia Avenue to south end	West side
98	Johnston Road	North of Quinto Court to south end	East side
99	Kahlo Court	Nancy Road to east end	North side
100	Kahlo Court	Nancy Road to east end	South side

Table 29 - Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
101	Lincoln Road	Short Avenue to 400' north	West side
102	Lincoln Road	Short Avenue to 300' north	East side
103	Luxor Avenue	Road 124 to David Road	North side
104	Merlo Avenue	Johnston Road to east end	North side
105	Merlo Avenue	Johnston Road to east end	South side
106	Miller Avenue	Road 126 to Claude Road	North side
107	Miller Avenue	Road 126 to Road 128	South side
108	Miller Avenue	Ralph Road to Road 130	North side
109	Miller Avenue	Ralph Road to Road 130	South side
110	Mueller Road	Avenue 404 to 175' north	West side
111	Nancy Road	Cannon Avenue to Rosalie Avenue	East side
112	Nancy Road	Cannon Avenue to Rosalie Avenue	West side
113	Nancy Road	Avenue 404 to Virgil Avenue	West side
114	Nancy Road	Avenue 404 to Virgil Avenue	East side
115	David Road	Avenue 416 to 200' south	East side
116	Olympic Street	Ash Avenue to north of Aceves Avenue	East side
117	Olympic Street	Ash Avenue to north of Aceves Avenue	West side
118	Orosi Drive	2nd Drive to Road 128	East side
119	Orosi Drive	2nd Drive to Road 128	West side
120	Orosi Drive	1st Drive to 200' north	West side
121	Orosi Drive	1st Drive to 200' north	East side
122	Orosi Drive	Railroad Drive to 200' north	East side
123	Pacifica Court	Miller Avenue to south end	East side
124	Pacifica Court	Miller Avenue to south end	West side
125	Paradise Court	Sequoia Avenue to south end	East side
126	Paradise Court	Sequoia Avenue to south end	West side
127	Quinto Court	Johnston Road to east end	North side
128	Quinto Court	Johnston Road to east end	South side
129	Railroad Drive	Road 124 to Topeka Drive	North side
130	Railroad Drive	225' east of Santa Fe Drive to Cutler Drive	North side
131	Railroad Drive	Orosi Drive to Road 128	North side
132	Ralph Road	Avenue 419 to 300' south	East side
133	Ralph Road	Avenue 419 to 300' south	West side
134	Ralph Road	Miller Avenue to Avenue 416	East side
135	Rancho Court	Albert Avenue to Ash Avenue	East side
136	Rancho Court	Albert Avenue to Ash Avenue	West side
137	Richau Street	Aceves Avenue to Ash Avenue	East side
138	Richau Street	Aceves Avenue to Ash Avenue	West side
139	Risley Avenue	Road 124 to Elrod Road	North side
140	Risley Avenue	Road 124 to Elrod Road	South side
141	Risley Avenue	Bend to Mueller Road	North side

Table 29 - Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
142	Risley Avenue	Bend to Mueller Road	South side
143	Rivera Court	Robert Road to west end	North side
144	Rivera Court	Robert Road to west end	South side
145	Road 124	Railroad Drive to Short Avenue	East side
146	Road 124	Avenue 413 to Aceves Avenue	East side
147	Road 124	Avenue 413 to Ash Avenue	West side
148	Road 124	400' south of Edward Avenue to 150' north of Ash Avenue	East side
149	Road 124	Avenue 414 to Luxor Avenue	East side
150	Road 124	Ella Avenue to Avenue 415	West side
151	Road 124	Ella Avenue to Risley Avenue	East side
152	Road 124	Avenue 419 to Buenna Vista Avenue	East side
153	Road 124	Badger Avenue to Buenna Vista Avenue	West side
154	Road 125	Whittaker Avenue to Avenue 419	East side
155	Road 125	Whittaker Avenue to Avenue 419	West side
156	Road 126	Avenue 422 to Avenue 419	East side
157	Road 126	Avenue 417 to Miller Avenue	West side
158	Road 127	Avenue 413 to 450' north	East side
159	Road 127	Avenue 416 to 500' south	West side
160	Road 127	Avenue 416 to Ella Avenue	East side
161	Road 128	Avenue 422 to 750' south	West side
162	Road 128	Avenue 419 to 550' south of Avenue 403	West side
163	Road 128	Clyde Avenue to 550' south of Avenue 403	East side
164	Road 130	Rosalie Avenue to Avenue 404	East side
165	Road 130	North end to 175' north of Walnut Avenue	West side
166	Road 130	North end to Avenue 419	East side
167	Road 130	Walnut Avenue to Avenue 416	East side
168	Robert Road	Avenue 404 to Rosalie Avenue	East side
169	Robert Road	Avenue 404 to Rosalie Avenue	West side
170	Robert Road	Virgil Avenue to north end	East side
171	Robert Road	Virgil Avenue to north end	West side
172	Rosalie Avenue	Road 130 to Dianna Road	North side
173	Rosalie Avenue	Road 130 to Dianna Road	South side
174	Santa Fe Drive	Railroad Drive to 125' north of 1st Drive	West side
175	Santa Fe Drive	1st Drive to 2nd Drive	East side
176	School Avenue	Road 128 to Mueller Road	North side
177	School Avenue	400' east of Road 128 to Mueller Road	South side
178	Sequoia Avenue	Wilsonia Avenue to Road 124	North side
179	Sequoia Avenue	Wilsonia Avenue to Road 124	South side
180	Short Avenue	Road 124 to Lincoln Road	North side
181	Short Avenue	Road 124 to Lincoln Road	South side

Table 29 - Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
182	Sierra Avenue	Robert Road to Dianna Road	North side
183	Sierra Avenue	Robert Road to Dianna Road	South side
184	Stewart Street	Dennison Drive to Buenna Vista Avenue	East side
185	Stewart Street	Dennison Drive to Buenna Vista Avenue	West side
186	Tactacan Avenue	Road 130 to west end	North side
187	Tactacan Avenue	Road 130 to west end	South side
188	Topeka Drive	Railroad Drive to 1st Drive	West side
189	Twin Peaks Avenue	Wilsonia Avenue to east end	North side
190	Twin Peaks Avenue	Wilsonia Avenue to east end	South side
191	Van Tassel Road	Avenue 419 to Whittaker Avenue	East side
192	Van Tassel Road	Avenue 419 to Whittaker Avenue	West side
193	Virgil Avenue	Johnston Road to Robert Road	North side
194	Virgil Avenue	Johnston Road to Robert Road	South side
195	Vista Court	Miller Avenue to south end	East side
196	Vista Court	Miller Avenue to south end	West side
197	Whittaker Avenue	Road 124 to Van Tassel Road	North side
198	Whittaker Avenue	Road 124 to Van Tassel Road	South side
199	Wilma Road	Ash Avenue to north of Aceves Avenue	East side
200	Wilma Road	Ash Avenue to north of Aceves Avenue	West side
201	Wilsonia Avenue	Badger Avenue to Sequoia Avenue	East side
202	Wilsonia Avenue	Badger Avenue to Sequoia Avenue	West side

Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure

ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself, which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Cutler-Orosi and are listed in **Table 30** and displayed in **Figure 19**.

Table 30 - Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadways**	**Location**

Table 30 - Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadways**	**Location**
1	1st Drive	Santa Fe Drive	NW Corner
2	1st Drive	Santa Fe Drive	SW Corner
3	1st Drive	Cutler Drive	SW Corner
4	1st Drive	Orosi Drive	NE Corner
5	1st Drive	Orosi Drive	NW Corner
6	Aceves Avenue	Road 120	NE Corner
7	Aceves Avenue	Road 120	SE Corner
8	Aceves Avenue	Richau Street	SE Corner
9	Aceves Avenue	Richau Street	SW Corner
10	Aceves Avenue	Wilma Road	NE Corner
11	Aceves Avenue	Wilma Road	NW Corner
12	Aceves Avenue	Wilma Road	SE Corner
13	Aceves Avenue	Wilma Road	SW Corner
14	Aceves Avenue	Olympic Street	NE Corner
15	Aceves Avenue	Olympic Street	NW Corner
16	Aceves Avenue	Olympic Street	SE Corner
17	Aceves Avenue	Olympic Street	SW Corner
18	Aceves Avenue	Birch Road	SE Corner
19	Aceves Avenue	Birch Road	SW Corner
20	Aceves Avenue	Road 124	NW Corner
21	Aceves Avenue	Road 124	SW Corner
22	Aceves Avenue	Road 124	NE Corner
23	Aceves Avenue	Road 124	SE Corner
24	Aceves Avenue	Frances Road	SE Corner
25	Aceves Avenue	Frances Road	SW Corner
26	Aceves Avenue	David Road	SW Corner
27	Albert Avenue	Richau Street	NE Corner
28	Albert Avenue	Richau Street	SE Corner
29	Albert Avenue	Wilma Road	SW Corner
30	Albert Avenue	Wilma Road	NE Corner
31	Albert Avenue	Wilma Road	SE Corner
32	Albert Avenue	Olympic Street	NE Corner
33	Albert Avenue	Olympic Street	NW Corner
34	Albert Avenue	Olympic Street	SE Corner
35	Albert Avenue	Olympic Street	SW Corner
36	Albert Avenue	Birch Road	NW Corner
37	Albert Avenue	Birch Road	SW Corner
38	Albert Avenue	Frances Road	SE Corner
39	Alta Drive	Orosi Drive	NW Corner
40	Alta Drive	Orosi Drive	SW Corner
41	Amethyst Avenue	Eddy Avenue	SE Corner

Table 30 - Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadways**	**Location**
42	Amethyst Avenue	George Road	SW Corner
43	Antonia Avenue	Nancy Road	NE Corner
44	Antonia Avenue	Nancy Road	SE Corner
45	Ash Avenue	Richau Street	NE Corner
46	Ash Avenue	Wilma Road	NE Corner
47	Ash Avenue	Wilma Road	NW Corner
48	Ash Avenue	Olympic Street	NE Corner
49	Ash Avenue	Olympic Street	NW Corner
50	Ash Avenue	Birch Road	NE Corner
51	Ash Avenue	Birch Road	NW Corner
52	Ash Avenue	Road 124	NW Corner
53	Ash Avenue	Rancho Court	NE Corner
54	Ash Avenue	Central Drive	NE Corner
55	Ash Avenue	Central Drive	NW Corner
56	Ash Avenue	David Road	SW Corner
57	Avenue 404	Mueller Road	NW Corner
58	Avenue 404	Cindy Road	NE Corner
59	Avenue 404	Cindy Road	NW Corner
60	Avenue 404	Nancy Road	NE Corner
61	Avenue 404	Nancy Road	NW Corner
62	Avenue 404	Robert Road	SE Corner
63	Avenue 404	Robert Road	SW Corner
64	Avenue 406	Eddy Avenue	SE Corner
65	Avenue 408	Villa de Guadalupe	NE Corner
66	Avenue 408	Villa de Guadalupe	NW Corner
67	Avenue 413	Road 124	SE Corner
68	Avenue 413	David Road	NE Corner
69	Avenue 413	Road 127	NE Corner
70	Avenue 413	Road 127	NW Corner
71	Avenue 413	Sequoia View Apts.	NE Corner
72	Avenue 413	Sequoia View Apts.	NW Corner
73	Avenue 414	David Road	SE Corner
74	Avenue 414	David Road	SW Corner
75	Avenue 414	Beinhorn Road	SW Corner
76	Avenue 414	Beinhorn Road	NE Corner
77	Avenue 414	Beinhorn Road	SE Corner
78	Avenue 414	Road 130	SW Corner
79	Avenue 415	Road 124	NW Corner
80	Avenue 415	Elrod Road	NW Corner
81	Avenue 416	Road 124	NE Corner
82	Avenue 416	Road 124	NW Corner

Table 30 - Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadways**	**Location**
83	Avenue 416	Road 124	SE Corner
84	Avenue 416	Road 124	SW Corner
85	Avenue 416	Road 125	NW Corner
86	Avenue 416	David Road	SE Corner
87	Avenue 416	David Road	SW Corner
88	Avenue 416	Road 126	NE Corner
89	Avenue 416	Road 126	NW Corner
90	Avenue 416	Eddy Road	NE Corner
91	Avenue 416	Eddy Road	NW Corner
92	Avenue 416	Road 127	SE Corner
93	Avenue 416	Road 127	SW Corner
94	Avenue 419	Road 124	SE Corner
95	Avenue 419	Van Tassel Road	SW Corner
96	Avenue 419	Van Tassel Road	SE Corner
97	Avenue 419	Road 126	NE Corner
98	Avenue 419	Road 126	SE Corner
99	Avenue 419	Ralph Road	SW Corner
100	Avenue 419	Road 130	SW Corner
101	Avenue 422	Road 126	SE Corner
102	Badger Avenue	Wilsonia Avenue	SE Corner
103	Badger Avenue	Road 124	NW Corner
104	Badger Avenue	Road 124	SW Corner
105	Barton Avenue	Road 124	NE Corner
106	Barton Avenue	Road 124	SE Corner
107	Barton Avenue	Van Tassel Road	NW Corner
108	Barton Avenue	Van Tassel Road	SW Corner
109	Buenna Vista Avenue	Colony Street	NE Corner
110	Buenna Vista Avenue	Stewart Street	NE Corner
111	Buenna Vista Avenue	Stewart Street	NW Corner
112	Buenna Vista Avenue	Road 125	NW Corner
113	Buenna Vista Avenue	Road 125	SW Corner
114	Cannon Avenue	Road 130	NE Corner
115	Cannon Avenue	Road 130	SE Corner
116	Cannon Avenue	Cindy Road	SE Corner
117	Cannon Avenue	Cindy Road	SW Corner
118	Cannon Avenue	Nancy Road	SE Corner
119	Cannon Avenue	Nancy Road	SW Corner
120	Cannon Avenue	Robert Road	NW Corner
121	Cannon Avenue	Robert Road	SW Corner
122	Dennison Drive	Road 124	NE Corner
123	Dennison Drive	Road 124	SE Corner

Table 30 - Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadways**	**Location**
124	Dennison Drive	Colony Street	SE Corner
125	Dennison Drive	Colony Street	SW Corner
126	Dennison Drive	Stewart Street	SW Corner
127	Edward Avenue	David Road	NW Corner
127	Edward Avenue	David Road	SW Corner
128	Ella Avenue	David Road	SE Corner
130	Ella Avenue	Beinhorn Road	SE Corner
131	Emerald Avenue	Pearl Road	SE Corner
132	Emerald Avenue	Pearl Road	SW Corner
133	Kahlo Court	Nancy Road	NE Corner
134	Kahlo Court	Nancy Road	SE Corner
135	Luxor Avenue	David Road	NW Corner
136	Merlo Avenue	Nancy Road	NE Corner
137	Merlo Avenue	Nancy Road	SE Corner
138	Merlo Avenue	Johnston Road	NE Corner
139	Merlo Avenue	Johnston Road	SE Corner
140	Merlo Avenue	Cindy Road	SE Corner
141	Merlo Avenue	Cindy Road	SW Corner
142	Merlo Avenue	Nancy Road	NW Corner
143	Merlo Avenue	Nancy Road	SW Corner
144	Miller Avenue	Road 130	NW Corner
145	Miller Avenue	Road 130	SW Corner
146	Miller Avenue	Pacifica Court	SW Corner
147	Miller Avenue	Pacifica Court	SE Corner
148	Miller Avenue	Vista Court	SE Corner
149	Miller Avenue	Vista Court	SW Corner
150	Miller Avenue	Ralph Road	SE Corner
151	Quinto Court	Johnston Road	NE Corner
152	Quinto Court	Johnston Road	SE Corner
153	Railroad Drive	Cutler Drive	NE Corner
154	Railroad Drive	Cutler Drive	NW Corner
155	Rivera Court	Robert Road	NW Corner
156	Rivera Court	Robert Road	SW Corner
157	Rosalie Avenue	Road 130	NE Corner
158	Rosalie Avenue	Cindy Road	NE Corner
159	Rosalie Avenue	Cindy Road	NW Corner
160	Rosalie Avenue	Nancy Road	NE Corner
161	Rosalie Avenue	Nancy Road	NW Corner
162	Rosalie Avenue	Robert Road	NE Corner
163	Rosalie Avenue	Robert Road	NW Corner
164	Rosalie Avenue	Dianna Road	NW Corner

Table 30 - Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadways**	**Location**
165	Sequoia Avenue	Granite Court	SW Corner
166	Sequoia Avenue	Paradise Court	SW Corner
167	Sequoia Avenue	Wilsonia Avenue	NE Corner
168	Sequoia Avenue	Road 124	NW Corner
169	Sierra Avenue	Robert Road	NE Corner
170	Sierra Avenue	Robert Road	NW Corner
171	Sierra Avenue	Robert Road	SE Corner
172	Sierra Avenue	Robert Road	SW Corner
173	Tactacan Avenue	Road 130	NW Corner
174	Tactacan Avenue	Road 130	SW Corner
175	Twin Peaks Avenue	Wilsonia Avenue	NE Corner
176	Twin Peaks Avenue	Wilsonia Avenue	SE Corner
177	Virgil Avenue	Johnston Road	NE Corner
178	Virgil Avenue	Johnston Road	SE Corner
179	Virgil Avenue	Nancy Road	SE Corner
180	Virgil Avenue	Nancy Road	SW Corner
181	Virgil Avenue	Robert Road	NW Corner
182	Whittaker Avenue	Road 124	NE Corner
183	Whittaker Avenue	Road 124	SE Corner
184	Whittaker Avenue	Road 125	SE Corner
185	Whittaker Avenue	Road 125	SW Corner
186	Whittaker Avenue	Van Tassel Road	NW Corner

Source: County of Tulare Public Works, August 2013

Street Lights

Streetlights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 31 identifies the location of existing streetlights that are maintained by Tulare County, in Cutler-Orosi, as well as their specifications. **Figure 19** also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

Table 31 - Existing Street Lights

No	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	1st Drive	Lincoln Road	NE Corner	N/A	5800	W	S	PG&E
2	1st Drive	Topeka Drive	NE Corner	1526	5800	W	S	PG&E
3	1st Drive	Santa Fe Drive	NW Corner	1528	5800	W	S	PG&E
4	1st Drive	Cutler Drive	SW Corner	1582	5800	W	S	PG&E
5	1st Drive	Orosi Drive	SE Corner	1523	5800	W	W	PG&E
6	1st Drive	Between Topeka Drive	North Side	1526	5800	W	S	PG&E
7	1st Drive	Between Santa Fe Drive	South Side	1560	5800	W	N	PG&E
8	1st Drive	Between Cutler Drive	South Side	1523	5800	W	W	PG&E
9	2nd Drive	George Road	West Side	N/A	5800	W	NE	PG&E
10	2nd Drive	Orosi Drive	NE Corner	1524	5800	W	S	PG&E
11	2nd Drive	Road 128	East Side	1606	5800	M	E	PG&E
12	2nd Drive	Santa Fe Drive	SW Corner	1586	5800	W	N	PG&E
13	2nd Drive	Between Santa Fe Drive and Cutler Drive	South Side	N/A	5800	W	N	PG&E
14	2nd Drive	Cutler Drive	SE Corner	1562	5800	W	N	PG&E
15	Aceves Avenue	Road 124	NE Corner	2025	N/A	M	E	PG&E
16	Aceves Avenue	Frances Road	North Side	2026	N/A	M	S	PG&E
17	Aceves Avenue	Between Frances Road and David Road	North Side	2027	N/A	N/A	S	PG&E
18	Aceves Avenue	Between Frances Road and David Road	North Side	N/A	N/A	N/A	S	PG&E
19	Aceves Avenue	David Road	East Side	2029	N/A	W	W	PG&E
20	Aceves Avenue	Birch Road	North Side	2642	5800	N/A	S	PG&E
21	Aceves Avenue	Road 120	NE Corner	N/A	5800	S	W	PG&E
22	Albert Avenue	Frances Road	West Side	N/A	N/A	N/A	E	PG&E
23	Albert Avenue	Between Rancho Court	North Side	2251	N/A	N/A	S	PG&E
24	Albert	David Road	East Side	N/A	N/A	N/A	W	PG&E

Table 31 - Existing Street Lights								
	Avenue							
25	Albert Avenue	Birch Road	East Side	2643	5800	N/A	W	PG&E
26	Albert Avenue	Road 128	SE Corner	2449	5800	N/A	W	PG&E
27	Albert Avenue	Road 130	South Side	2280	5800	N/A	N	PG&E
28	Alta Drive	South of Avenue 406	West Side	1600	5800	W	S	PG&E
29	Alta Drive	Between Avenue 406 and Orosi Drive	South Side	N/A	5800	N/A	N	PG&E
30	Alta Drive	Orosi Drive	SW Corner	1602	5800	W	E	PG&E
31	Amethyst Avenue	Road 124	SE Corner	1544	5800	W	E	PG&E
32	Amethyst Avenue	Lincoln Road	NE Corner	N/A	5800	W	S	PG&E
33	Amethyst Avenue	Road 125	North Side	1579	5800	W	S	PG&E
34	Amethyst Avenue	George Road	East Side	1580	5800	W	W	PG&E
35	Amethyst Avenue	Eddy Avenue	West Side	N/A	5800	W	E	PG&E
36	Amethyst Avenue	East of Eddy Avenue	South Side	1580	5800	W	N	PG&E
37	Amethyst Avenue	Road 127	East Side	1595	5800	W	W	PG&E
38	Ash Avenue	Birch Road	NW Corner	2644	5800	N/A	S	PG&E
39	Ash Avenue	Road 124	NW Corner	N/A	N/A	N/A	E	PG&E
40	At south end	Ralph Road	East Side	1534	5800	W	S	PG&E
41	Avenue 404	Road 128	NE Corner	1520	5800	W	W	PG&E
42	Avenue 404	Ralph Road	SE Corner	1525	5800	W	N	PG&E
43	Avenue 404	Mueller Road	South Side	1505	5800	W	N	PG&E
44	Avenue 404	Nancy Road	NW Corner	2758	5800	M	S	PG&E
45	Avenue 404	Between Ralph Road and Mueller Road	South Side	1554	5800	W	N	PG&E
46	Avenue 404	Cindy Road	South Side	2390	5800	S	N	PG&E
47	Avenue 404	Robert Road	SE Corner	2022	5800	S	N	PG&E
48	Avenue 406	Lincoln Road	West Side	1582	5800	W	E	PG&E
49	Avenue 406	Eddy Avenue	West Side	N/A	N/A	N/A	E	PG&E
50	Avenue 406	Between Eddy Avenue and Alta Drive	North Side	N/A	N/A	N/A	S	PG&E
51	Avenue 406	Between Alta Drive and Road 127	North Side	N/A	N/A	N/A	S	PG&E
52	Avenue 406	Between Lincoln Road and George Road	North Side	N/A	N/A	N/A	S	PG&E
53	Avenue 406	George Road	East Side	N/A	N/A	N/A	W	PG&E
54	Avenue 407	George Road	SE Corner	1538	5800	W	N	PG&E
55	Avenue 407	Eddy Avenue	SE Corner	1539	5800	W	W	PG&E
56	Avenue 407	Road 124	West Side	1575	5800	W	E	PG&E
57	Avenue 407	Lincoln Road	South Side	1576	5800	W	N	PG&E
58	Avenue 407	Topeka Drive	South Side	1578	5800	W	N	PG&E
59	Avenue 407	Between Topeka Drive	South Side	N/A	N/A	N/A	N	PG&E
60	Avenue 408	Road 120	NW Corner	2762	9500	W	S	PG&E
61	Avenue 408	Road 124	NW Corner	1483	5800	N/A	S	PG&E
62	Avenue 408	Lincoln Road	NW Corner	1586	5800	W	S	PG&E
63	Avenue 408	Villa De	NW Corner	1569	5800	N/A	S	PG&E

Table 31 - Existing Street Lights								
		Guadalupe Apts.						
64	Avenue 408	West of Lee Road	North Side	1593	5800	N/A	S	PG&E
65	Avenue 408	SR 63	NW Corner	N/A	5800	N/A	S	PG&E
66	Avenue 408	SR 63	NE Corner	N/A	5800	N/A	W	PG&E
67	Avenue 408	SR 63	SE Corner	N/A	5800	N/A	N	PG&E
68	Avenue 408	SR 63	SW Corner	N/A	5800	N/A	E	PG&E
69	Avenue 408	West of SR 63	North Side	N/A	N/A	N/A	S	PG&E
70	Avenue 412	SR 63	SE Corner	N/A	5800	N/A	N	PG&E
71	Avenue 412	Between Road 128 and Road 130	South Side	N/A	5800	N/A	N	PG&E
72	Avenue 412	Road 130	SE Corner	2279	N/A	W	N	PG&E
73	Avenue 413	Road 124	SE Corner	1668	N/A	N/A	W	PG&E
74	Avenue 413	Between Road 124 and David Road	North Side	1678	N/A	N/A	S	PG&E
75	Avenue 413	Between Road 124 and	North Side	1680	N/A	N/A	S	PG&E
76	Avenue 413	David Road	NW Corner	1682	N/A	N/A	SE	PG&E
77	Avenue 413	Between David Road and Road 127	South Side	1683	N/A	N/A	N	PG&E
78	Avenue 413	Road 127	NE Corner	N/A	N/A	N/A	S	PG&E
79	Avenue 413	Road 127	South Side	N/A	N/A	N/A	N	PG&E
80	Avenue 413	SR 63	NE Corner	N/A	N/A	N/A	W	PG&E
81	Avenue 413	SR 63	NW Corner	N/A	N/A	N/A	S	PG&E
82	Avenue 413	SR 63	SE Corner	N/A	N/A	N/A	N	PG&E
83	Avenue 413	SR 63	SW Corner	N/A	N/A	N/A	E	PG&E
84	Avenue 413	East end	North Side	2639	5800	N/A	S	PG&E
85	Avenue 414	David Road	SE Corner	1651	5800	W	W	PG&E
86	Avenue 414	Ledbetter Drive	NW Corner	1641	5800	W	SE	PG&E
87	Avenue 414	Road 127	SE Corner	1636	5800	N/A	W	PG&E
88	Avenue 414	Road 126	East Side	1676	N/A	N/A	W	PG&E
89	Avenue 414	Road 124	West Side	1667	N/A	N/A	E	PG&E
90	Avenue 414	East of Road 124	North Side	1669	N/A	N/A	S	PG&E
91	Avenue 414	Road 130	NE Corner	1662	5800	N/A	W	PG&E
92	Avenue 414	SR 63	NE Corner	N/A	5800	N/A	W	PG&E
93	Avenue 414	East of Road 128	North Side	1660	N/A	N/A	S	PG&E
94	Avenue 415	SR 63	NE Corner	1715	5800	W	W	PG&E
95	Avenue 415	Mueller Road	SE Corner	1643	5800	W	W	PG&E
96	Avenue 415	Road 128	NE Corner	1666	5800	W	N	PG&E
97	Avenue 415	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
98	Avenue 415	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
99	Avenue 415	Elrod Road	NW Corner	2033	N/A	S	S	PG&E
100	Avenue 416	Road 124	NW Corner	3338	9500	W	S	PG&E
101	Avenue 416	Road 124	SE Corner	3341	9500	W	N	PG&E
102	Avenue 416	Road 125	NW Corner	1648	5800	O	S	PG&E
103	Avenue 416	David Road	NW Corner	1647	5800	O	S	PG&E
104	Avenue 416	Road 126	NW Corner	1611	5800	O	S	PG&E
105	Avenue 416	Eddy Road	NW Corner	2187	5800	O	S	PG&E
106	Avenue 416	Road 127	NW Corner	1632	5800	M	S	PG&E
107	Avenue 416	Claude Road	NE Corner	1613	5800	O	S	PG&E
108	Avenue 416	Ralph Road	NE Corner	2188	5800	W	S	PG&E
109	Avenue 416	Road 130	NE Corner	1649	5800	W	S	PG&E
110	Avenue 416	Road 120	NW Corner	3259	16000	W	S	PG&E
111	Avenue 416	Lincoln Road	NE Corner	2188	5800	N/A	S	PG&E
112	Avenue 416	SR 63	NE Corner	2358	N/A	N/A	W	PG&E
113	Avenue 416	SR 63	NW Corner	2357	N/A	N/A	S	PG&E
114	Avenue 416	SR 63	SE Corner	2356	N/A	N/A	N	PG&E
115	Avenue 416	SR 63	SW Corner	2355	16000	N/A	E	PG&E

Table 31 - Existing Street Lights								
116	Avenue 417	Road 125	NE Corner	1639	5800	W	W	PG&E
117	Avenue 417	Road 126	SW Corner	1634	5800	W	E	PG&E
118	Avenue 417	SR 63	SW Corner	2189	5800	M	E	PG&E
119	Avenue 417	Claude Road	SW Corner	1631	5800	W	E	PG&E
120	Avenue 417	Road 130	SW Corner	2199	5800	S	E	PG&E
121	Avenue 417	West of Road 130	South Side	2198	5800	S	N	PG&E
122	Avenue 418	SR 63	West Side	1637	5800	N/A	E	PG&E
123	Avenue 419	Ralph Road	NW Corner	1655	5800	W	S	PG&E
124	Avenue 419	Road 126	SW Corner	1689	N/A	W	E	PG&E
125	Avenue 419	Claude Road	South Side	1690	N/A	W	N	PG&E
126	Avenue 419	SR 63	SW Corner	1716	N/A	W	W	PG&E
127	Avenue 419	Between Road 129 and Road 130	North Side	1696	5800	W	S	PG&E
127	Avenue 419	Between Road 129 and	North Side	1690	5800	W	S	PG&E
128	Avenue 419	Road 130	East Side	1698	5800	W	W	PG&E
130	Badger Avenue	Wilsonia Avenue	West Side	2920	N/A	N/A	E	PG&E
131	Badger Avenue	Between Wilsonia	North Side	2921	N/A	N/A	S	PG&E
132	Badger Avenue	Road 124	SW Corner	2922	N/A	N/A	E	PG&E
133	Between Avenue 414 and Ella Avenue	David Road	East Side	1671	N/A	W	W	PG&E
134	Between Avenue 414	David Road	East Side	1672	N/A	N/A	W	PG&E
135	Between Avenue 414	Road 126	West Side	1674	N/A	N/A	E	PG&E
136	Between Avenue 414 and Ella Avenue	Road 126	West Side	1675	N/A	N/A	E	PG&E
137	Cannon Avenue	Between Sierra Avenue and Road 130	North Side	1549	5800	W	W	PG&E
138	Cannon Avenue	Road 130	NE Corner	1550	5800	W	W	PG&E
139	Cannon Avenue	Robert Road	East Side	2023	5800	S	W	PG&E
140	Cannon Avenue	Nancy Road	North Side	2021	5800	S	S	PG&E
141	Cannon Avenue	Cindy Road	North Side	2020	5800	S	S	PG&E
142	Cannon Avenue	Road 130	NE Corner	N/A	N/A	N/A	W	PG&E
143	Clyde Avenue	SR 63	NE Corner	1695	16000	W	W	PG&E
144	Clyde Avenue	East of SR 63	North Side	1707	5800	W	S	PG&E
145	Clyde Avenue	Between SR 63 and Road 130	North Side	N/A	5800	N/A	S	PG&E
146	Clyde Avenue	Road 130	East Side	1710	5800	W	W	PG&E
147	Dawson Avenue	SR 63	NE Corner	1652	5800	M	W	PG&E
148	Dawson Avenue	East end	East Side	1652	5800	N/A	W	PG&E
149	Edward Avenue	Road 124	SE Corner	2249	N/A	N/A	N	PG&E
150	Edward	Frances Road	South Side	2249	N/A	M	S	PG&E

Table 31 - Existing Street Lights								
	Avenue							
151	Ella Avenue	Beinhorn Road	SW Corner	1654	5800	W	N	PG&E
152	Ella Avenue	David Road	NE Corner	1650	5800	W	W	PG&E
153	Ella Avenue	Road 127	NW Corner	1629	5800	W	E	PG&E
154	Ella Avenue	Ralph Road	SE Corner	1645	5800	W	N	PG&E
155	Ella Avenue	Mueller Road	NW Corner	1646	5800	W	S	PG&E
156	Ella Avenue	SR 63	SW Corner	1615	5800	W	E	PG&E
157	Ella Avenue	Elrod Road	NE Corner	2037	N/A	S	SW	PG&E
158	Ella Avenue	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
159	Ella Avenue	Between Road 124 and Elrod Road	North Side	2035	N/A	S	S	PG&E
160	Ella Avenue	Road 126	North Side	1673	N/A	N/A	S	PG&E
161	Ella Avenue	Road 130	East Side	1665	9500	W	W	PG&E
162	Emerald Avenue	Road 127	West Side	1598	5800	W	E	PG&E
163	Emerald Avenue	Pearl Road	North Side	1590	5800	W	S	PG&E
164	Emerald Avenue	SR 63	East Side	1604	9500	S	E	PG&E
165	Hazel Avenue	Lee Road	NW Corner	1540	5800	W	E	PG&E
166	Ira Avenue	SR 63	East Side	N/A	5800	N/A	W	PG&E
167	Ira Avenue	Road 127	North Side	3036	N/A	W	S	PG&E
168	Ledbetter Drive	Road 130	East Side	1663	5800	W	W	PG&E
169	Luxor Avenue	Road 124	SW Corner	1653	5800	N/A	E	PG&E
170	Luxor Avenue	David Road	SW Corner	1681	N/A	N/A	E	PG&E
171	Luxor Avenue	Between Road 124 and	South Side	1677	N/A	N/A	N	PG&E
172	Luxor Avenue	Between Road 124 and David Road	South Side	N/A	N/A	N/A	N	PG&E
173	Merlo Avenue	Johnston Road	SW Corner	2759	5800	W	E	PG&E
174	Merlo Avenue	Cindy Road	SE Corner	2756	5800	M	N	PG&E
175	Merlo Avenue	Nancy Road	SW Corner	2757	5800	M	E	PG&E
176	Miller Avenue	Road 125	SE Corner	1638	5800	W	W	PG&E
177	Miller Avenue	Road 126	NW Corner	1628	5800	W	E	PG&E
178	Miller Avenue	Eddy Road	NW Corner	1618	5800	W	S	PG&E
179	Miller Avenue	Claude Road	NW Corner	1627	5800	W	E	PG&E
180	Miller Avenue	SR 63	NW Corner	1633	5800	O	E	PG&E
181	Miller Avenue	Ralph Road	SE Corner	1704	5800	W	W	PG&E
182	Miller Avenue	Road 130	East Side	3033	5800	W	W	PG&E
183	Miller Avenue	Pacifica Court	SE Corner	3327	5800	S	W	PG&E
184	Miller Avenue	Vista Court	SE Corner	3326	5800	S	N	PG&E
185	North of Avenue 414	Beinhorn Road	West Side	1687	N/A	N/A	E	PG&E
186	North of	Dianna Road	East Side	2269	5800	S	W	PG&E

Table 31 - Existing Street Lights								
	Rosalie Avenue							
100	North of Rosalie Avenue	Nancy Road	East Side	2077	5800	S	W	PG&E
101	North of Rosalie Avenue	Cindy Road	East Side	2076	5800	S	W	PG&E
102	North of Sierra Avenue	Dianna Road	North Side	2079	5800	S	S	PG&E
103	Orosi Drive	Road 128	SW Corner	1607	5800	W	E	PG&E
104	Quinto Court	Johnston Road	West Side	2651	5800	M	E	PG&E
105	Railroad Drive	Orosi Drive	SE Corner	1522	5800	W	N	PG&E
106	Railroad Drive	Santa Fe Drive	NW Corner	1527	5800	W	S	PG&E
107	Railroad Drive	Road 128	East Side	N/A	5800	W	W	PG&E
108	Railroad Drive	Road 124	East Side	1543	5800	N/A	SW	PG&E
109	Railroad Drive	Lincoln Road	North Side	N/A	5800	W	S	PG&E
110	Railroad Drive	Topeka Drive	NE Corner	1591	5800	W	S	PG&E
111	Railroad Drive	Between Topeka Drive and Santa Fe Drive	North Side	1592	5800	N/A	S	PG&E
112	Railroad Drive	Between Santa Fe Drive and Cutler Drive	North Side	N/A	5800	W	S	PG&E
113	Railroad Drive	Cutler Drive	South Side	N/A	5800	W	N	PG&E
114	Railroad Drive	Between Orosi Drive and Road 128	South Side	1522	5800	W	N	PG&E
115	Risley Avenue	Between Road 128 and Avenue 415	South Side	1642	5800	W	N	PG&E
116	Risley Avenue	Road 124	NE Corner	2044	N/A	N/A	W	PG&E
117	Risley Avenue	Between Road 124 and Elrod Road	North Side	2045	N/A	S	S	PG&E
118	Risley Avenue	Elrod Road	NW Corner	2047	N/A	W	W	PG&E
119	Risley Avenue	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
120	Risley Avenue	SR 63	NE Corner	N/A	N/A	N/A	W	PG&E
121	Rosalie Avenue	Road 130	NE Corner	453	5800	S	W	PG&E
122	Rosalie Avenue	Nancy Road	South Side	2180	5800	S	N	PG&E
123	Rosalie Avenue	Robert Road	South Side	2267	5800	S	N	PG&E
124	Rosalie Avenue	Dianna Road	South Side	2268	5800	S	NW	PG&E
125	Rosalie Avenue	Cindy Road	South Side	N/A	N/A	N/A	N	PG&E
126	Rufus Drive	Orosi Drive	North Side	1566	5800	W	S	PG&E
127	Rufus Drive	Orosi Drive	East Side	1533	5800	W	W	PG&E
127	Miller Avenue	Road 125	SE Corner	1638	5800	W	W	PG&E

Table 31 - Existing Street Lights								
128	Miller Avenue	Road 126	NW Corner	1628	5800	W	E	PG&E
130	Miller Avenue	Eddy Road	NW Corner	1618	5800	W	S	PG&E
131	Miller Avenue	Claude Road	NW Corner	1627	5800	W	E	PG&E
132	Miller Avenue	SR 63	NW Corner	1633	5800	O	E	PG&E
133	Miller Avenue	Ralph Road	SE Corner	1704	5800	W	W	PG&E
134	Miller Avenue	Road 130	East Side	3033	5800	W	W	PG&E
135	Miller Avenue	Pacifica Court	SE Corner	3327	5800	S	W	PG&E
136	Miller Avenue	Vista Court	SE Corner	3326	5800	S	N	PG&E
137	North of Avenue 414	Beinhorn Road	West Side	1687	N/A	N/A	E	PG&E
138	North of Rosalie Avenue	Dianna Road	East Side	2269	5800	S	W	PG&E
139	North of Rosalie Avenue	Nancy Road	East Side	2077	5800	S	W	PG&E
140	North of Rosalie Avenue	Cindy Road	East Side	2076	5800	S	W	PG&E
141	North of Sierra Avenue	Dianna Road	North Side	2079	5800	S	S	PG&E
142	Orosi Drive	Road 128	SW Corner	1607	5800	W	E	PG&E
143	Quinto Court	Johnston Road	West Side	2651	5800	M	E	PG&E
144	Railroad Drive	Orosi Drive	SE Corner	1522	5800	W	N	PG&E
145	Railroad Drive	Santa Fe Drive	NW Corner	1527	5800	W	S	PG&E
146	Railroad Drive	Road 128	East Side	N/A	5800	W	W	PG&E
147	Railroad Drive	Road 124	East Side	1543	5800	N/A	SW	PG&E
148	Railroad Drive	Lincoln Road	North Side	N/A	5800	W	S	PG&E
149	Railroad Drive	Topeka Drive	NE Corner	1591	5800	W	S	PG&E
150	Railroad Drive	Between Topeka Drive and Santa Fe Drive	North Side	1592	5800	N/A	S	PG&E
151	Railroad Drive	Between Santa Fe Drive and Cutler Drive	North Side	N/A	5800	W	S	PG&E
152	Railroad Drive	Cutler Drive	South Side	N/A	5800	W	N	PG&E
153	Railroad Drive	Between Orosi Drive and Road 128	South Side	1522	5800	W	N	PG&E
154	Risley Avenue	Between Road 128 and Avenue 415	South Side	1642	5800	W	N	PG&E
155	Risley Avenue	Road 124	NE Corner	2044	N/A	N/A	W	PG&E
156	Risley Avenue	Between Road 124 and Elrod Road	North Side	2045	N/A	S	S	PG&E

Table 31 - Existing Street Lights								
157	Risley Avenue	Elrod Road	NW Corner	2047	N/A	W	W	PG&E
158	Risley Avenue	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
159	Risley Avenue	SR 63	NE Corner	N/A	N/A	N/A	W	PG&E
160	Rosalie Avenue	Road 130	NE Corner	453	5800	S	W	PG&E
161	Rosalie Avenue	Nancy Road	South Side	2180	5800	S	N	PG&E
162	Rosalie Avenue	Robert Road	South Side	2267	5800	S	N	PG&E
163	Rosalie Avenue	Dianna Road	South Side	2268	5800	S	NW	PG&E
164	Rosalie Avenue	Cindy Road	South Side	N/A	N/A	N/A	N	PG&E
165	Rufus Drive	Orosi Drive	North Side	1566	5800	W	S	PG&E
166	Rufus Drive	Orosi Drive	East Side	1533	5800	W	W	PG&E
167	Miller Avenue	Road 125	SE Corner	1638	5800	W	W	PG&E
168	Miller Avenue	Road 126	NW Corner	1628	5800	W	E	PG&E
169	Miller Avenue	Eddy Road	NW Corner	1618	5800	W	S	PG&E
170	Miller Avenue	Claude Road	NW Corner	1627	5800	W	E	PG&E
171	Miller Avenue	SR 63	NW Corner	1633	5800	O	E	PG&E
172	Miller Avenue	Ralph Road	SE Corner	1704	5800	W	W	PG&E
173	Miller Avenue	Road 130	East Side	3033	5800	W	W	PG&E
174	Miller Avenue	Pacifica Court	SE Corner	3327	5800	S	W	PG&E
175	Miller Avenue	Vista Court	SE Corner	3326	5800	S	N	PG&E
176	North of Avenue 414	Beinhorn Road	West Side	1687	N/A	N/A	E	PG&E
177	North of Rosalie Avenue	Dianna Road	East Side	2269	5800	S	W	PG&E
178	North of Rosalie Avenue	Nancy Road	East Side	2077	5800	S	W	PG&E
179	North of Rosalie Avenue	Cindy Road	East Side	2076	5800	S	W	PG&E
180	North of Sierra Avenue	Dianna Road	North Side	2079	5800	S	S	PG&E
181	Orosi Drive	Road 128	SW Corner	1607	5800	W	E	PG&E
182	Quinto Court	Johnston Road	West Side	2651	5800	M	E	PG&E
183	Railroad Drive	Orosi Drive	SE Corner	1522	5800	W	N	PG&E
184	Railroad Drive	Santa Fe Drive	NW Corner	1527	5800	W	S	PG&E
185	Railroad Drive	Road 128	East Side	N/A	5800	W	W	PG&E
186	Railroad Drive	Road 124	East Side	1543	5800	N/A	SW	PG&E
187	Railroad Drive	Lincoln Road	North Side	N/A	5800	W	S	PG&E

Table 31 - Existing Street Lights								
188	Railroad Drive	Topeka Drive	NE Corner	1591	5800	W	S	PG&E
189	Railroad Drive	Between Topeka Drive and Santa Fe Drive	North Side	1592	5800	N/A	S	PG&E
190	Railroad Drive	Between Santa Fe Drive and Cutler Drive	North Side	N/A	5800	W	S	PG&E
191	Railroad Drive	Cutler Drive	South Side	N/A	5800	W	N	PG&E
192	Railroad Drive	Between Orosi Drive and Road 128	South Side	1522	5800	W	N	PG&E
193	Risley Avenue	Between Road 128 and Avenue 415	South Side	1642	5800	W	N	PG&E
194	Risley Avenue	Road 124	NE Corner	2044	N/A	N/A	W	PG&E
195	Risley Avenue	Between Road 124 and Elrod Road	North Side	2045	N/A	S	S	PG&E
196	Risley Avenue	Elrod Road	NW Corner	2047	N/A	W	W	PG&E
197	Risley Avenue	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
198	Risley Avenue	SR 63	NE Corner	N/A	N/A	N/A	W	PG&E
199	Rosalie Avenue	Road 130	NE Corner	453	5800	S	W	PG&E
200	Rosalie Avenue	Nancy Road	South Side	2180	5800	S	N	PG&E
201	Rosalie Avenue	Robert Road	South Side	2267	5800	S	N	PG&E
202	Rosalie Avenue	Dianna Road	South Side	2268	5800	S	NW	PG&E
203	Rosalie Avenue	Cindy Road	South Side	N/A	N/A	N/A	N	PG&E
204	Rufus Drive	Orosi Drive	North Side	1566	5800	W	S	PG&E
205	Rufus Drive	Orosi Drive	East Side	1533	5800	W	W	PG&E
206	Miller Avenue	Road 125	SE Corner	1638	5800	W	W	PG&E
207	Miller Avenue	Road 126	NW Corner	1628	5800	W	E	PG&E
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210	Miller Avenue	SR 63	NW Corner	1633	5800	O	E	PG&E
211	Miller Avenue	Ralph Road	SE Corner	1704	5800	W	W	PG&E
212	Miller Avenue	Road 130	East Side	3033	5800	W	W	PG&E
213	Miller Avenue	Pacifica Court	SE Corner	3327	5800	S	W	PG&E
214	Miller Avenue	Vista Court	SE Corner	3326	5800	S	N	PG&E
215	Rufus Drive	Road 127	North Side	1566	5800	W	S	PG&E

Source: Tulare County Housing Element – Action Program 9 Existing Infrastructure,

Cutler-Orosi Community Plan Update

The Need for a Community Plan

Purpose

The Cutler-Orosi Community Plan was adopted in 1988. Conditions in Cutler-Orosi have changed and policies and implementation strategies should be updated to address existing conditions. This community plan update will be used to foster economic development by identifying opportunities for development. This community plan is also a part of the implementation of the San Joaquin Valley Regional Blueprint, Tulare County Regional Blueprint, Transportation Concept Report State Route 63-District, and the Tulare County 2030 General Plan.

Relationship to the General Plan

Tulare County's General Plan provides a comprehensive statement of the objectives, themes and policies, which the community is seeking to achieve in the areas of land use, growth management, community design, transportation, open space, parks and public facilities, environmental conservation, health and safety, noise, and housing. This Community Plan, as an instrument which promulgates and is an extension of the General Plan, incorporates, by definition, the stated general objectives, themes and policies and, where more specific objectives and policies are stated, makes reference to such objectives and policies and provides further elaboration on the ways in which the Community Plan is responsive to this guidance. Relevant General Plan goals, policies, and programs that provide direction and input to this Community Plan are provided in this document. In addition, this plan has specific policies for the Community of Cutler-Orosi.

Planning Framework

San Joaquin Valley Regional Blueprint

"The San Joaquin Valley Blueprint is the result of an unprecedented effort of the eight Valley Regional Planning Agencies (RPA), that include the Fresno Council of Governments, the Kern Council of Governments, the Kings County Association of Governments, the Madera County Transportation Commission, the Merced County Association of Governments, the San Joaquin Council of Governments, the Stanislaus Council of Governments, and the Tulare County Association of Governments, to develop a long-term regional growth strategy for the future of the San Joaquin Valley. Following three-years of visioning and outreach by the eight Valley RPAs, the Regional Policy Council (RPC), the decision-making body for the Valleywide process, adopted the Valley Blueprint in April 2009.

The Blueprint is a long-range vision for a more efficient, sustainable, and livable future for the Valley. The Valleywide Blueprint is made up three elements: a 2050 growth scenario diagram that identifies areas of existing development, new development, and future regional transit and highway improvements; a Valleywide average target density of 6.8 units per acre for new residential growth to the year 2050; and a set of 12 Smart Growth Principles. Importantly, the Blueprint recognizes and

incorporates by reference the visioning and outreach efforts undertaken by the eight Valley Regional Planning Agencies."[41]

Tulare County Regional Blueprint

"TCAG and its member agencies felt that it was important to prepare a Tulare County Regional Blueprint that clarified Tulare County's role in the Blueprint process. The Tulare County Regional Blueprint is a stand-alone policy document that is consistent with the San Joaquin Valley Regional Blueprint. This document represents Tulare County's local vision and goals as a participant in the San Joaquin Valley Regional Blueprint process."[42] Key elements of the preferred growth scenario outlined in the Tulare County Regional Blueprint include 25% increase in overall density and focused growth in urban areas.

TCAG, Tulare County Regional Bicycle Transportation Plan, Regional Transportation Plan (RTP) and Sustainable Communities Strategy

TCAG in 2014 updated a Regional Bicycle Plan that does not include any bicycle facilities through the Community of Cutler-Orosi. TCAG funded the grant for this Complete Streets Policy and in the RTP Action Element describes bicycle circulation patterns and pedestrian policies focusing on the Americans with Disabilities Planning Strategies and Transportation Demand Management to increase pedestrian activity. In addition, rail and goods movement is part of the Sustainable Communities Strategy in lieu of utilizing diesel powered freight trucks.

Senate Bill 244, Housing Element Implementation

Senate Bill (SB) 244, passed by the California Legislature and signed into law in 2011, requires California municipalities analyze the inequality and infrastructure deficits within disadvantaged unincorporated communities (DUCs), which lack basic community infrastructure like sidewalks, safe drinking water, and adequate waste processing. As a part of this process and the implementation of the Housing Element the County continues to identify housing related infrastructure needs, such as; water, sewer, natural gas or streetlights, using community needs assessments, housing condition surveys, public comments at community meetings, redevelopment implementation plans and amendments, community plans and other relevant information from the Health & Human Services Agency (HHSA) Environmental Health Services, Regional Water Quality Control Board, public utility districts, community services districts and other agencies. The County of Tulare prepared a 2016 Disadvantage Unincorporated Communities Assessment (infrastructure needs assessment) of the County in conjunction with SB 244 and Action Program 9 as part of the 2015 Tulare County Housing Element Update.

Transportation Concept Report (TRC)-State Route (SR) 63

The purpose of the TCR is to evaluate current, project conditions along the route, and communicate the vision for the development of each route in each Caltrans District during a 20-25 year planning horizon. The TRC is developed with the goals of increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, transit, pedestrian,

[41] San Joaquin Valley Blueprint Roadmap Guidance Framework, page i
[42] Tulare County Regional Blueprint, page 3

bicycle, freight, operational improvements, and travel demand management components of the corridor.

Transportation Concept Report (TRC)-State Route (SR) 201

The TRC is a planning document that identifies the existing and future route conditions as well as future needs for each route on the State Highway System. The TRC is developed with the goals of increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements, and travel demand management components of the corridor.

Tulare County 2030 General Plan Implementation

This Community Plan is intended to implement the Tulare County 2030 General Plan. The General Plan Policies relevant to this Community Plan are outlined in General Plan Policies Section below. In addition to the General Plan Policies, this Community Plan outlines policies specific to Cutler-Orosi. Following are the ways in which this Community Plan implements the General Plan:

- Update Zoning Map to match the Community Plan Land Use Map.
- Addition of Design Standards to replace use permit standards.
- Update Zoning text to outline allowed uses in this Community Plan.
- Introduction of a Mixed Use Overlay Zoning District
- Provides a Market Analysis of the Cutler-Orosi Area.
- Provides an updated analysis of Cutler-Orosi's population and housing characteristics.
- Defines an economic development strategy.

Tulare County 2030 General Plan Implementation

This Community Plan is intended to implement the Tulare County 2030 General Plan. The General Plan Policies relevant to this Community Plan are outlined in General Plan Policies Section below. In addition to the General Plan Policies, this Community Plan outlines policies specific to Cutler-Orosi. Following are the ways in which this Community Plan implements the General Plan:

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- Introduction of a Mixed Use Overlay Zoning District
- Provides a Market Analysis of the Cutler-Orosi Area.
- Provides an updated analysis of Cutler-Orosi's population and housing characteristics.
- Defines an economic development strategy.

Community Plan Update Project Description and Objectives

On December 10, 2014, the Tulare County Board of Supervisors (BOS) approved General Plan Implementation (GPI 13-004) by Resolution 2103-0860 for the Planning Branch proposal to update the Cutler-Orosi Community Plan. The project Study Area Boundary will assess the potential project

impacts from the proposed land use changes, for the areas south of Avenue 422 and north of Avenue 400, east of Road 116 and west of Road 134. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Cutler-Orosi Community Plan 2021 Update components are described later in this section will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the following General Plan goals:
   a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
   b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
   c) Reduce development pressure on agriculturally designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
   d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
   e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be improved for the following reasons:
   a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
   b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
   c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

Community Outreach Process

Community outreach is vital to the success of the community plan update, because it provided the opportunity for residents to share their ideas and concerns in Cutler-Orosi. This also helps guide decisions on priorities for the community and identify potential challenges. The update process included extensive community and policymaker engagements that were conducted in English and Spanish.

Cutler-Orosi Public Meetings

In order to ensure that the Cutler-Orosi Community Plan 2021 Update was a community-driven, the County conducted public outreach meetings from 2015 through 2020. Broad public input was obtained through a series of workshops where residents, employees, property owners, as well as representatives from the school district and the public utility district, and the surrounding neighborhoods, weighed in on issues and provided recommendations **(see Attachment A-7)**.

Complete Streets

- Complete Streets Meeting February 2, 2015
- Complete streets Meeting March 3, 2015

Cutler-Orosi Joint Unified School Board District meeting

- March 14, 2019

Cutler School meetings

- May 2, 2019
- May 7, 2019

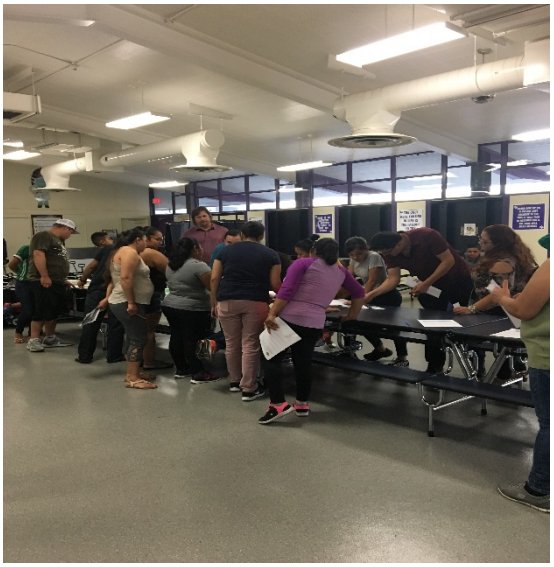
2019 LCAP Community Input Forums

County of Tulare Resource Management Agency (RMA) staff joined Yolanda Valdez, Superintendent, Cutler-Orosi Joint Unified School District, for Back to School Nights at the following schools in Cutler-Orosi. The focus of these workshops were to understand the community's vision and priorities for Cutler-Orosi.

- Cutler Elementary School August 20, 2019
- Orosi High School, August 21, 2019
- Golden Valley Elementary School August 22, 2019
- Palm Elementary School August 27, 2019
- Lovell High School August 28, 2019
- El Monte Middle School September 3, 2019
- Family Education Center September 4, 2019
- Family Education Center September 10, 2019

To reach a larger selection of community members the County of Tulare worked with Yolanda Valdez, Superintendent, of the Cutler-Orosi Joint Unified School District to attend Back to School Nights at the below schools. Tables were set up for County staff to lay out maps of the Cutler-Orosi area to give the participants hands on opportunity discuss with the parents living in Cutler-Orosi School District and opportunity for them to show us their vision. Participants identified a number of public safety concerns, largely relating to infrastructure. These concerns included a need for new lights in neighborhoods, flashing lights, crosswalks, widening of dangerous sidewalks, and pedestrian related concerns along various roadways. Feedback from participants has been combined into a vision map and spreadsheet addressing the Public Safety Improvement Concerns **(see Figure 20)**.


BIG
WORK
HARD
GIVE BACK



Draft Cutler-Orosi Community Plan 2021 Update

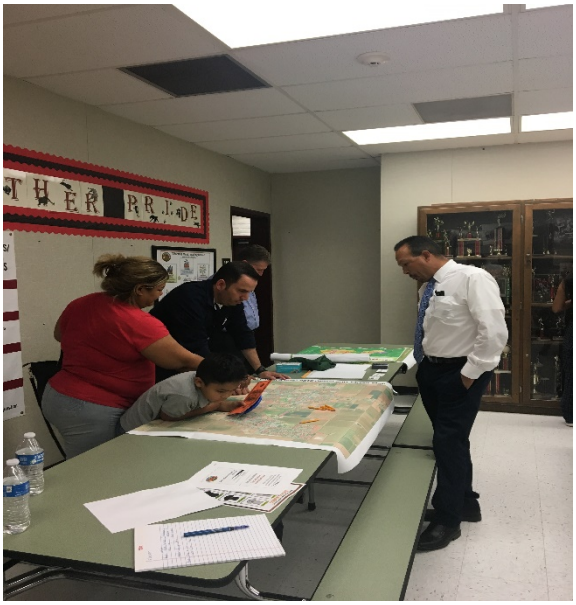
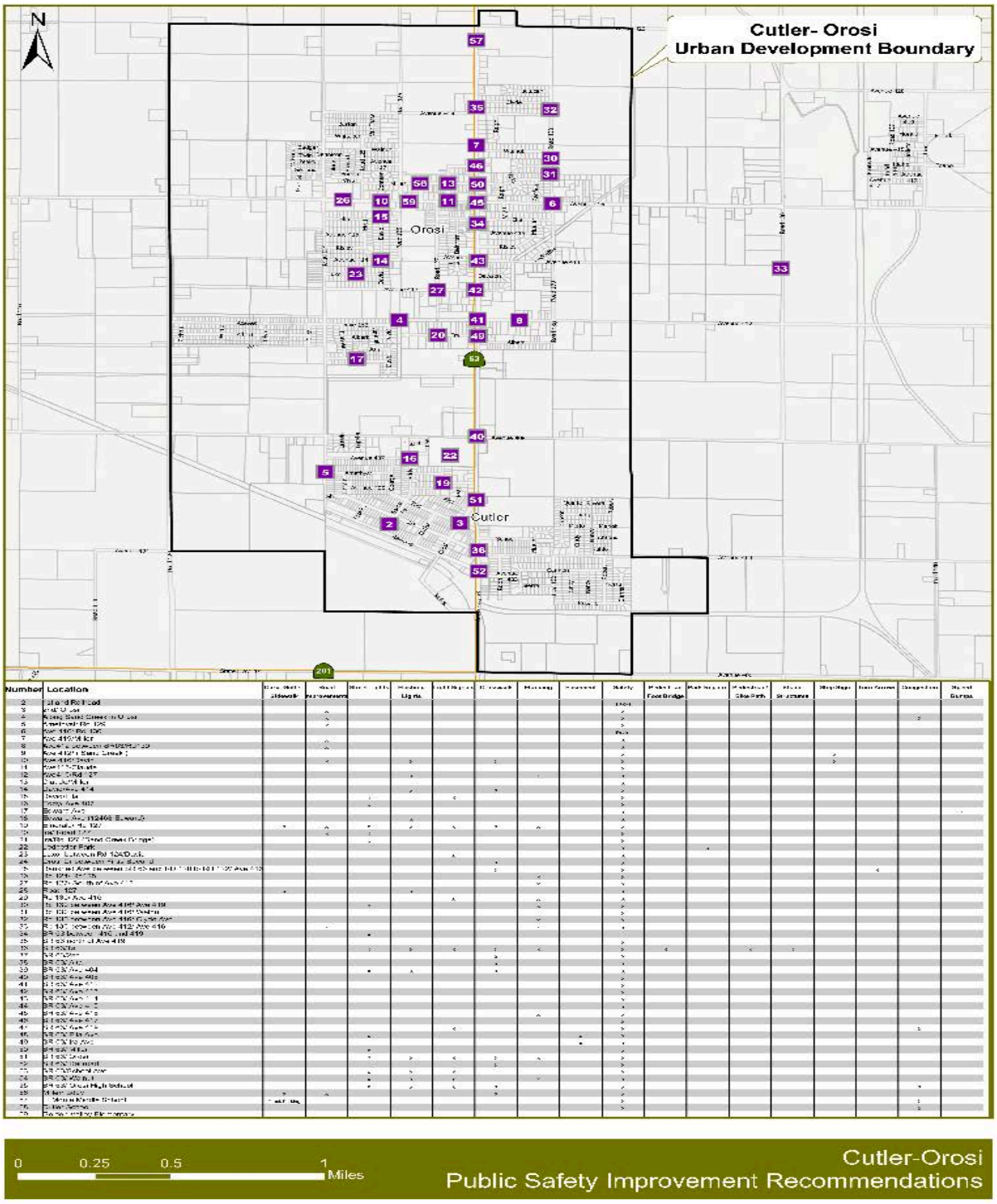


Figure - 21 Cutler-Orosi Community Concerns



Draft Cutler-Orosi Community Plan 2021 Update

Cutler-Orosi/East Orosi Bus Tour October 1, 2019

County of Tulare RMA staff joined Superintendent Yolanda Valdez and Supervisor Eddie Valero for a guided bus tour around Cutler, Orosi, and East Orosi informing them of infrastructure needs within these communities. The tour included the Orosi Recreation Sports Complex Phase 1 and explanation of the proposed Phase 2 prior to the scheduled Cutler-Orosi Town Hall meeting.

Cutler Orosi Town Hall Meeting October 1, 2019

Tulare County Supervisor Eddie Valero and Superintendent Yolanda Valdez held a Town Hall at the Cutler-Orosi Joint Union School District Board Chambers. At the Town Hall meeting Supervisor Valero welcomed the public and made introductions. Presentations were made by the Cutler-Orosi after School Program. Tulare County staff presented updates and answered questions for the different County Departments as follows:

- Tulare County Water Resource Program
- Tulare County Fire Department
- Tulare County Sheriff's Department
- Tulare County Planning Department
- Resource Management Agency – Code Enforcement
- Resource Management Agency – Roads
- Resource Management Agency – Transit
- Tulare County Animal Services
- Tulare County Parks and Recreation

Cutler Public Utility District

- March 19, 2019
- April 19, 2019

Orosi Public Utility District

- April 9, 2019

2019/2020 County Transportation Improvement Program 19/20 CTIP

Tulare County receives funding for transportation projects from a variety of sources. These sources can be divided into three categories: Local, State, and Federal. Local sources consist primarily of Measure R (1/2 cent sales tax specifically for transportation and some Maintenance Assessment district revenues. State sources include Local Transportation Funds (from sales tax), and SB1 and Highway User Tax Account (Gas taxes). Federal sources include a variety of competitive grant funds as well as allocations from transportation spending legislation, which can vary from year to year. A road fund balance does exist for transportation projects, emergencies, and other necessary reserves. No property taxes or County general funds are applied to road maintenance and construction within Tulare County.

The CTIP includes all new projects that will be started in the FY 2019/2020. Two projects for the community of Cutler and one project for the community of Orosi, was approved by the Tulare County Board of Supervisors on June 18, 2019, by Resolution No. 2019-0542.

2017 CTIP:

- Avenue 416 Crosswalk and ADA Ramps budgeted at $200,000 (Construction summer 2019).

2018 CTIP:

- Orosi- ADA Improvement & Blade Patching budgeted at $500,000 (Construction in Summer 2019)
- Cutler- ADA Improvement & Blade Patching budgeted at $300,000 (Construction in Summer 2019)
- Cutler- Road 144 and Avenue 384 to Avenue 416 budgeted at $1,600,000 (Construction in Progress)

2019 CTIP (Proposed projects):

- Orosi- ADA Improvement & Blade Patching budgeted at $200,000 (Construction in Summer 2020)
- Cutler- ADA Improvement & Blade Patching budgeted at $200,000 (Construction in Progress)

Summer 2020

- George Road and 2nd Drive in Cutler. Pedestrian improvements (sidewalk and drainage improvements to be specific) with an estimated cost of $2,500,000.

Sustainability

Climate Change/Adaptation/Resiliency/Sustainability

According to the 2017 Tulare County Multi Jurisdiction Local Hazard Mitigation Plan (LHMP), Climate change has occurred throughout the history of the planet. Due to variations in the earth's inclination to the sun, volcanic activity and other factors such as asteroids impacts, the amount of solar radiation reaching the earth's surface. The temperature of the planet correlates to the amount of solar radiation arriving at the surface and with it the climate.

In relatively recent history, the last glacial period, popularly known as the Ice Age, occurred from c. 110,000 to 12,000 years ago. This most recent glacial period is part of a larger pattern of glacial and interglacial periods known as the Quaternary glaciation (c. 2,588,000 years ago to present). From this point of view, scientists consider this "ice age" to be merely the latest glaciation event in a much larger ice age, one that dates back over two million years and is still ongoing. During this last glacial period, there were several changes between glacier advance and retreat. The Last Glacial Maximum, the maximum extent of glaciation within the last glacial period, was approximately 22,000 years ago. While the general pattern of global cooling and glacier advance was similar, local differences in the development of glacier advance and retreat make it difficult to compare the details from continent to continent. Generally, the pattern of temperature variation and glaciation has lagged atmospheric carbon dioxide (CO2) content.

The Tulare County (County) has prepared the 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) to assess the natural, technological, and human-caused risks to County communities, to reduce the potential impact of the hazards by creating mitigation strategies. The 2017 MJLHMP represents the County's commitment to create a safer, more resilient community by taking actions to reduce risk and by committing resources to lessen the effects of hazards on the people and property of the County.

The plan complies with The Federal Disaster Mitigation Act (DMA 2000), Federal Register 44 CFR Parts 201 and 206, which modified the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) by adding a new section, 322 - Mitigation Planning. This law, as of November 1, 2004, requires local governments to develop and submit hazard mitigation plans as a condition of receiving Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) and other mitigation project grants. The County; the Cities of Dinuba, Exeter, Farmersville, Lindsay, Porterville, Tulare, Visalia, and Woodlake; the Tule River Tribe; and Special

District staffs have coordinated preparation of the MJLHMP in cooperation with stakeholders, partner agencies and members of the public.

Tulare County Climate Action Plan

Tulare County adopted a Climate Action Plan (CAP) on August 28, 2012. The CAP is an implementation measure of the 2030 General Plan Update. The policies, regulations, and programs considered in the CAP include those by federal, state, and local governments.

"The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation."[43]

Tulare County General Plan Policies (Sustainability)

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to Sustainability include the following.

LU-1.1 Smart Growth and Healthy Communities

The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development.

LU-1.8 Encourage Infill Development

The County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

[43] Tulare County Climate Action Plan, page 1

LU-7.15 Energy Conservation
The County shall encourage the use of solar power and energy conservation building techniques in all new development.

LU-7.16 Water Conservation
The County shall encourage the inclusion of "extra-ordinary' water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

LU-7.17 Shared Parking Facilities
The County shall encourage, where feasible, the use of shared parking facilities. Such areas could include developments with different day/night uses.

AQ-3.3 Street Design
The County shall promote street design that provides an environment, which encourages transit use, biking, and pedestrian movements.

AQ-3.5 Alternative Energy Design
The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses
The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.

TCAG Sustainable Communities Strategy (2018 Regional Transportation Plan)

AB 32 set emission targets for the State of California. SB 375 requires the California Air Resources Board to set greenhouse gas emission targets for different regions in California. Under SB 375 Metropolitan Planning Organizations like TCAG are required to create a Sustainable Communities Strategy. TCAG included this strategy in the 2018 Regional Transportation Plan. Highlights of the implementation strategies include:

- Encourage jurisdictions in Tulare County to consider bicycle lanes, public transit, transit-oriented and mixed-use development, pedestrian networks, train and other Complete Streets development during updates of general plan or other local plans.
- Implement a Complete Streets Program whereby agencies will prepare plans to accommodate all transportation users, including pedestrians, bicyclists, transit riders, and motor vehicle operators and riders, and implement those plans as aggressively as feasible.
- Provide for continued coordination and evaluation of the planned circulation system among cities and the county.
- Fund the development of capital improvement programs for Complete Streets and active

transportation-type plans, as funds are available.

- Evaluate intersections, bridges, interchanges, and rail grade crossings for needed safety improvements.

- Develop funding strategies for safety projects in cooperation with Caltrans and member agencies.
- Examine alternative funding sources for streets, roads, state highways, rail systems, transit, bicycle, pedestrian, and other transportation mode improvements.
- Utilize Cap and Trade funds available for transit, if available, for projects in Tulare County.
- Encourage local agencies to support implementation of bicycle support facilities such as bike racks, showers, and other facilities during the project review process.
- Utilize Cap and Trade funds available for bicycle and pedestrian projects, if available, for projects in Tulare County.
- Encourage mixed-use developments in urbanized areas.
- Encourage provision of an adequate supply of housing for the region's workforce and adequate sites to accommodate business expansion to minimize interregional trips and long-distance commuting.
- Support and participate in efforts and coalitions promoting use of Cap and Trade funding for projects that help reduce greenhouse gas emissions in Tulare County.
- Support investment in bicycle and pedestrian systems, giving attention to projects and networks that will allow residents to walk and bicycle to frequented destinations, including schools, parks, healthcare institutions and transit stops.
- Provide environmental justice communities opportunities for input into transportation plans, programs, and projects in a manner consistent with Title VI of the 1964 Civil Rights Act and Executive Order 12898 on Environmental Justice, including the prohibition of intentional discrimination and adverse disparate impact with regard to race, ethnicity or national origin.

These implementation strategies are compatible with the Tulare County General Plan policies.

Urban Development Boundary

Urban Development Boundaries (UDBs) are officially adopted and mapped County lines delineating the area expected for urban growth in cities and unincorporated communities over a 20-year period. Within UDB boundaries, the County and cities will coordinate plans, policies and standards related to building construction, subdivision development, land use and zoning regulations, street and highway construction, public utility systems, environmental studies, and other closely related matters affecting the orderly development of urban fringe areas. These boundaries provide an official definition of the interface between future urban and agricultural land uses.[44]

"For unincorporated communities, the UDB is a County adopted line dividing land to be developed from land to be protected for agricultural, natural, open space, or rural uses. It serves as the official planning area for communities over a 20-year period. Land within an unincorporated UDB is

[44] TCGPU Part 1, Goals and Policies Report, Planning Framework, page 2-3

assumed appropriate for development and is not subject to the Rural Valley Lands Plan or Foothill Growth Management Plan (RVLP Policy 1-1)"[45]

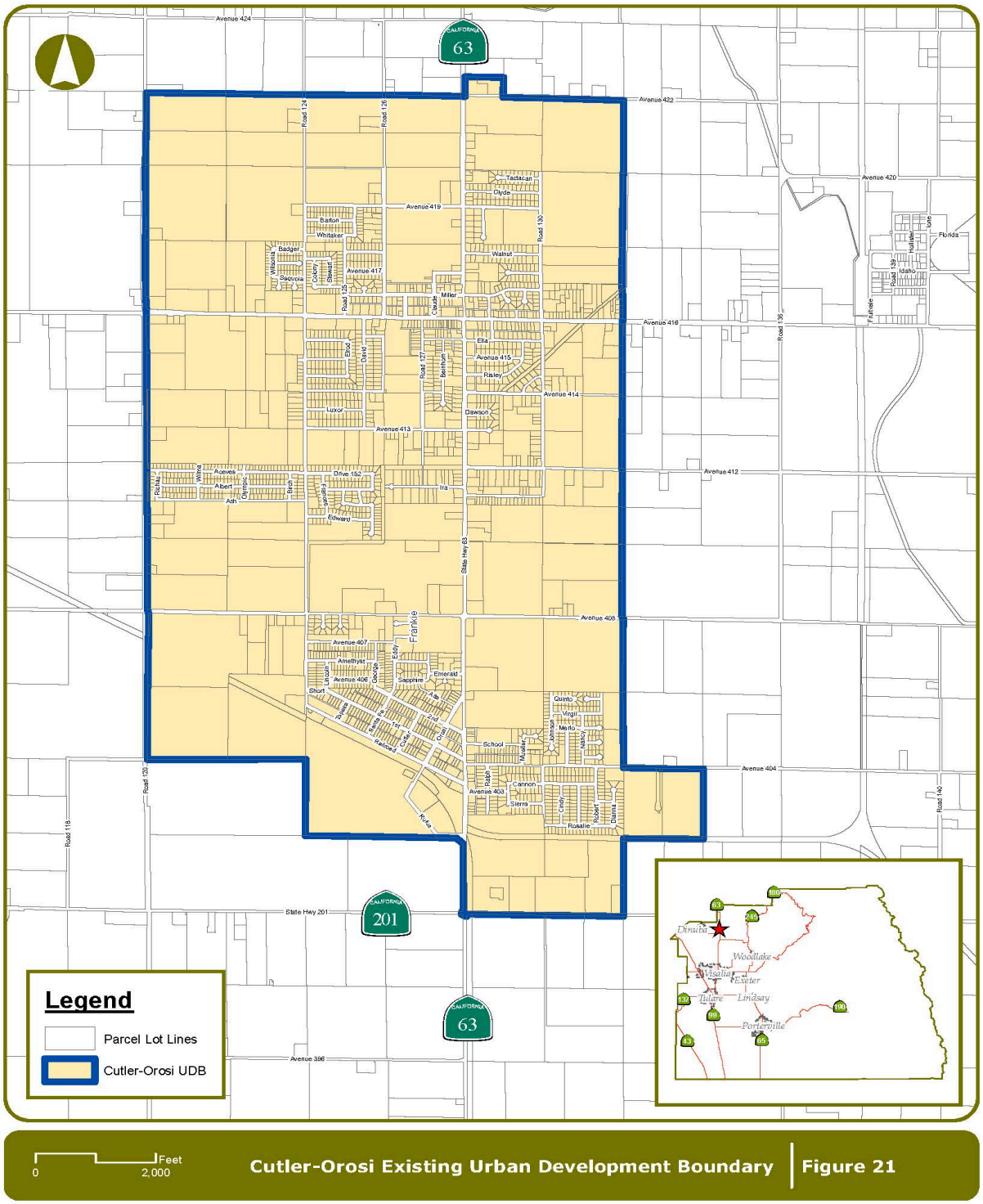
The purpose of this chapter is to review the adequacy of the adopted Urban Development Boundary (UDB) and determine through analysis contained in this chapter whether modifications may be required. The proposed UDB functions as the planning area boundary of the Cutler-Orosi Community Plan **(see Figure 21)**. The UDB line establishes a twenty-year growth boundary for the community of Cutler-Orosi. Over the years, services will be extended into this area, which will allow new growth to occur. Since the UDB line defines the area where growth will occur, it is logical that it also serves as the planning area boundary for this plan.

In addition to defining there in which future development of the community of Cutler-Orosi will occur, designating an urban boundary can provide local agencies and citizens with other benefits, including:

1. Encouraging coordination between land use planning and the provision of governmental services.
2. Identifying and resolving potential interagency conflicts regarding service areas.
3. Encouraging efficient, economical and effective delivery of public services.
4. Allowing property owners to identify the type and level of service their lands presently receive or may receive in the future.
5. Assisting in the County's efforts to preserve open space and productive agricultural land.

[45] TCGPU Part 1, Goals and Policies Report, Planning Framework, page 2-3

Figure 22 - Existing Urban Development Boundary



Policy Framework

In determining a UDB and planning area for the Cutler-Orosi Community Plan, it is important to not only fulfill the requirements of State planning law, but to the greatest degree possible, fulfill the local goals and policies that regulate land uses in the area. As discussed earlier, there are many County policies that guide development in Cutler-Orosi area. However, those which have direct effect on the establishment of the community's urban boundary include the following policies in the Tulare County General Plan Planning Framework Element:

PF-2.1 Urban Development Boundaries – Communities

The County shall limit urban development to the area within the designated UDB for each community. Each community's UDB is defined as shown on Figures 2.2-2 thru 2.2-22.

PF-2.2 Modification of Community UDB

1. The County may consider modification to a community UDB under any of, but not limited to the following circumstances:
    a. The location of the UDB shall be evaluated during preparation or update of a community plan.
    b. All community UDBs should be reviewed on a five-year cycle to reflect changes in growth and development patterns.
    c. A request for expansion of the UDB boundary can be applied for as part of a General Plan Amendment to the Land Use Diagram.
    d. At the request of a special district or the community.
    e. A UDB should be considered for expansion at such time as land for infill becomes limited. This condition is considered satisfied when 80 percent of the non-Williamson Act land within the UDB is developed for urban uses.
    f. UDBs should not be expanded onto Prime Farmland if Farmland of Statewide Importance or of lesser quality is available and suitable for expansion.

2. Prior to approval of a UDB boundary expansion, the County shall ensure that infrastructure can be provided to serve the new areas added to the UDB and that sufficient water supplies are also available. This may require preparation of an infrastructure master plan that includes methods of financing of improvements and maintenance, as well as representation/documentation of availability and sufficiency of long-term water supplies.

3. Preservation of productive agricultural lands shall be the highest priority when considering modifications. Expansion of a UDB to include additional agricultural land shall only be allowed when other non-agricultural lands are not reasonably available to the community or are not suitable for expansion.

PF-2.3 UDB and Other Boundaries

The County shall provide notice and opportunity for special districts, school districts, and other service providers to comment when evaluating the expansion of a Community's UDB.

PF-2.8 Inappropriate Land Use

Areas within UDBs are hereby set aside for those types of urban land uses, which benefit from urban services. Permanent uses, which do not benefit from such urban services, shall be discouraged within the UDBs. This is not intended to apply to agricultural or agricultural supported uses, including the cultivation of land or other uses accessory to the cultivation of land, provided that such accessory uses are time-limited through special use permit procedures.

Existing Adopted Land Use Plan

Existing Land Use Plan

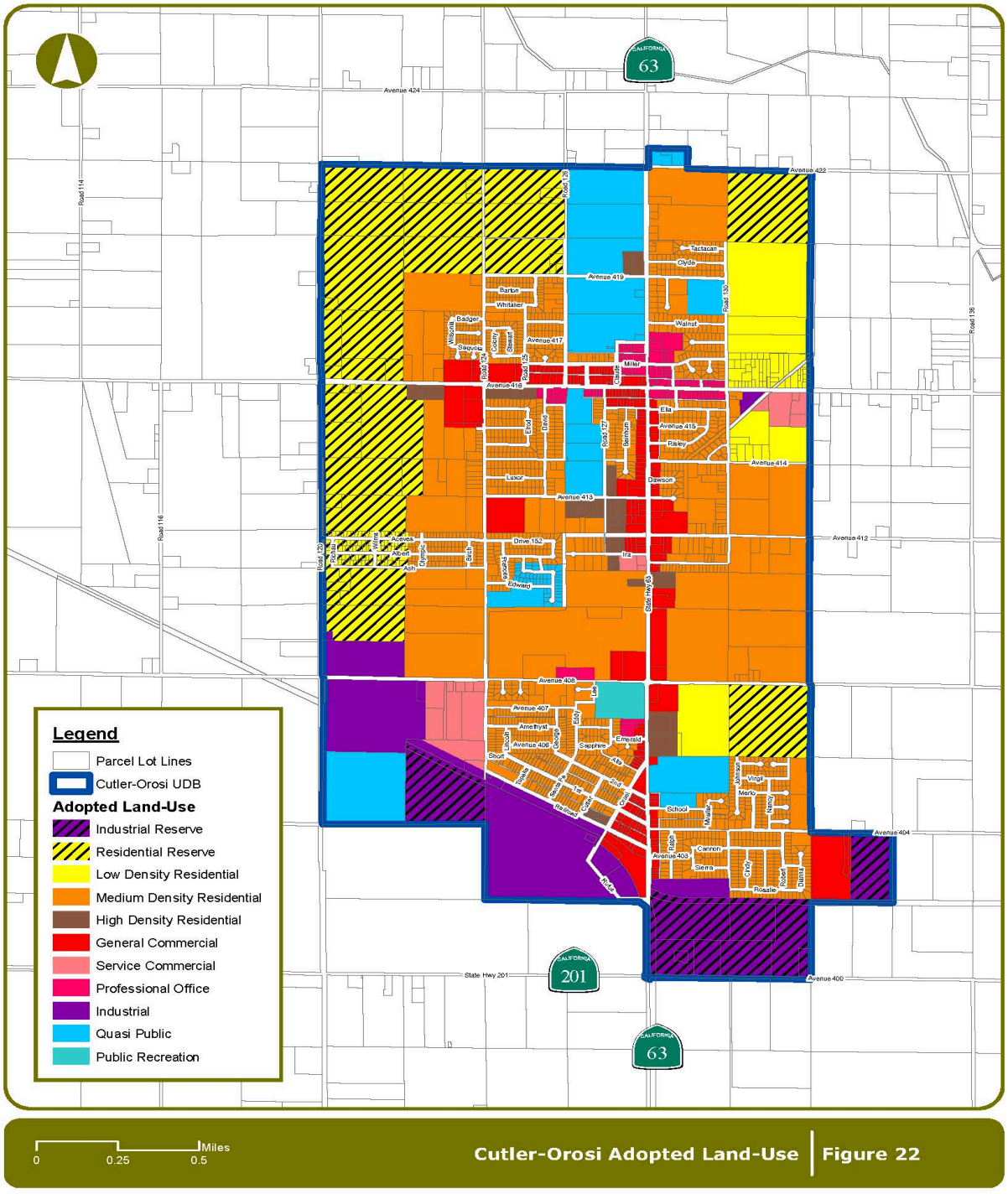
Table 32 land in the adopted Cutler-Orosi Community Planning area is designated Residential (1,014 acres). In total, there is about 2,412.3 acres of designated lands in the Cutler-Orosi Community Planning Area **(see Figure 22)**. Approximately 231.3 acres within the plan area is dedicated to rights-of-way.

Table 32 – Adopted Land Use

Designation	Total Acreage	Percentage
General Commercial	140.4	5.74
High Density Residential	38.7	1.58
Industrial	168.3	6.89
Industrial Reserve	135.0	5.53
Low Density Residential	125.1	5.12
Medium Density Residential	850.2	34.82
Professional Office	28.6	1.17
Public Recreation	11.9	0.49
Quasi-Public	201.1	8.23
Residential Reserve	459.9	18.83
Service Commercial	42.8	1.75
(blank)	8.3	0.34
Unclassified (Right-of-Way)	231.3	9.47
Total	**2,441.9**	**100**

Source: Tulare County GIS

Figure 23 – Adopted Land Use Plan Map as Amended



Existing Adopted Zoning Districts

Existing Zoning Districts

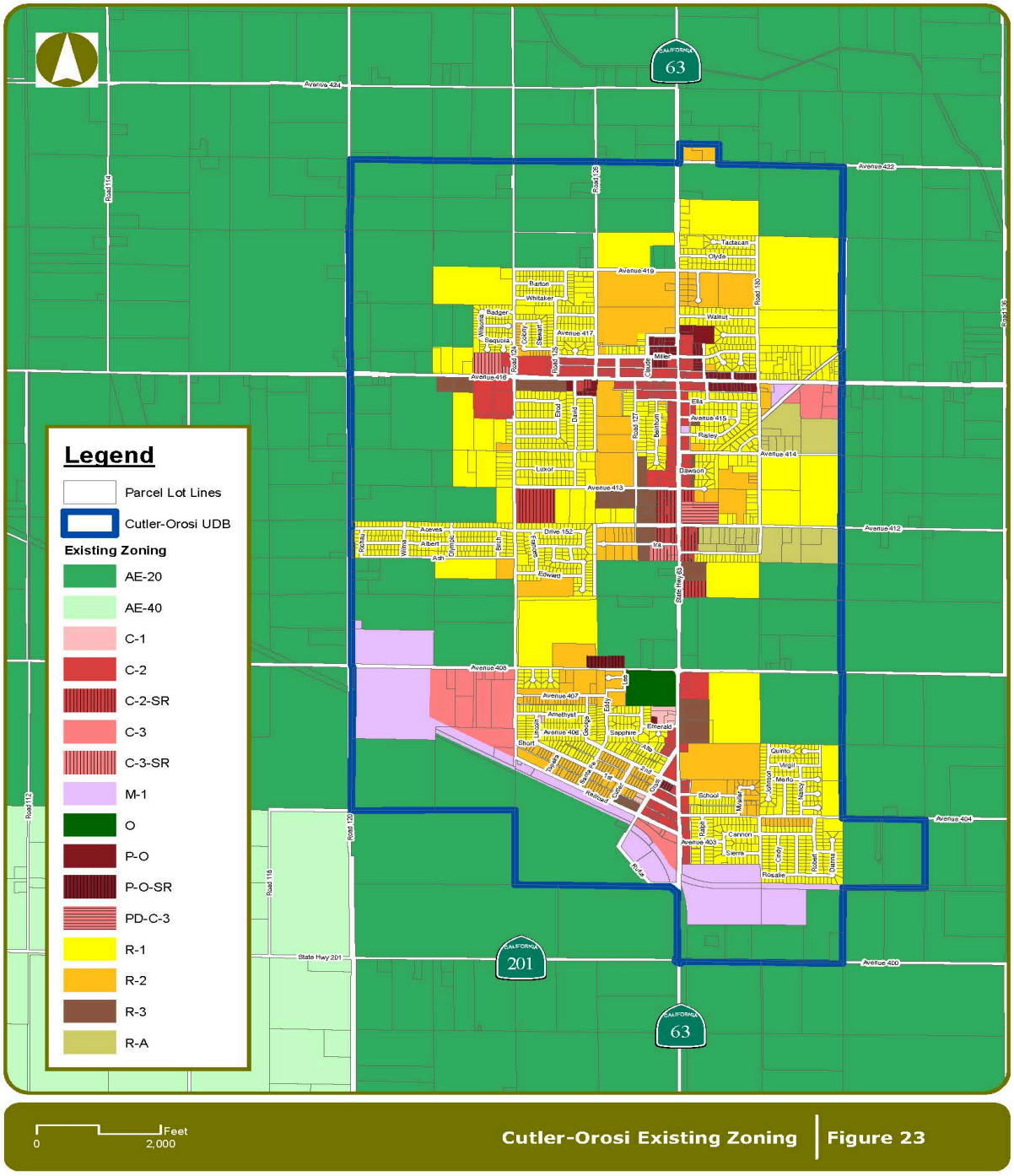
The zoning designations within the existing Cutler-Orosi Community Plan UDB are shown in **Figure 21** and demonstrated in **Table 33.**

Table 33 - Existing Zoning Districts

Zoning Designations	Existing Acres	Percent
AE-20	956.9	39.1
C-1	3.5	0.1
C-2	69.8	2.8
C-2-SR	23.2	0.9
C-3	55.1	2.2
C-3-SR	7.5	0.3
M-1	130.8	5.3
O	11.9	0.4
PD-C-3	5.4	0.2
P-O	16.6	0.6
P-O-SR	3.1	0.1
R-1	644.3	26.3
R-2	189.1	7.7
R-3	36.3	1.4
R-A	50.3	2.0
Z	6.8	0.2
Unclassified (Right-of-Way)	231.3	9.4
Total	**2,441.9**	**100**

Source: Tulare County GIS

Figure 24 - Existing Zoning Districts Map



General Plan Policies

The following adopted policies from the Tulare County General Plan are applicable to the Cutler-Orosi Community Plan. Policies throughout the General Plan use the terminology "shall" and "should." For the purposes of interpreting the policies in the General Plan, the term "shall" indicates a mandatory or required action or a duty to undertake an action unless the context indicates otherwise, in which case the term is synonymous with "should." The term "should," indicates a directive subject to discretion and requires at least review or consideration and, in that context, substantial compliance with the spirit or purpose of these General Plan policies. The term "may" indicates at the sole discretion of the County.

Land Use Policies

PF-1.3 Land Uses in UDBs/HDBs
The County shall encourage those types of urban land uses that benefit from urban services to develop within UDBs and HDBs. Permanent uses, which do not benefit from urban services shall be discouraged within these areas. This shall not apply to agricultural or agricultural support uses, including the cultivation of land or other uses accessory to the cultivation of land provided that such accessory uses are time-limited through Special Use Permit procedures.

PF-2.6 Land Use Consistency
The County shall require all community plans, when updated, to use the same land use designations as used in this Countywide General Plan (See Chapter 4-Land Use). All community plans shall also utilize a similar format and content. The content may change due to the new requirements such as Global Climate Change and Livable Community Concepts, as described on the table provided (Table 2.1: Community Plan Content). Changes to this format may be considered for unique and special circumstances as determined appropriate by the County. Until such time as a Community Plan is adopted for those communities without existing Community Plans, the land use designation shall be Mixed Use, which promotes the integration of a compatible mix of residential types and densities, commercial uses, public facilities, services and employment opportunities.

PF-2.8 Inappropriate Land Use
Areas within UDBs are hereby set aside for those types of urban land uses, which benefit from urban services. Permanent uses, which do not benefit from such urban services shall be discouraged within the UDBs. This is not intended to apply to agricultural or agricultural supported uses, including the cultivation of land or other uses accessory to the cultivation of land, provided that such accessory uses are time-limited through special use permit procedures.

PF-4.7 Avoiding Isolating Unincorporated Areas
The County may oppose any annexation proposal that creates an island, peninsula, corridor, or irregular boundary. The County will also encourage the inclusion of unincorporated islands or peninsulas adjacent to proposed annexations.

LU-1.2 Innovative Development
The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other

innovative development and planning techniques.

LU-1.3 Prevent Incompatible Uses
The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.

LU-1.4 Compact Development
The County shall actively support the development of compact mixed-use projects that reduce travel distances.

LU-3.1 Residential Developments
The County shall encourage new major residential development to locate near existing infrastructure for employment centers, services, and recreation.

LU-3.2 Cluster Development
The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately maintained road designed to meet County road standards.

LU-3.3 High-Density Residential Locations
The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

LU-3.4 Mountain, Rural, and Low-Density Residential
The Mountain, Rural, and Low-Density Residential development located outside of a UDB shall be subject to the following requirements:

1. Able to meet the Rural Valley Lands Plan policies, Foothill Growth Management Plan policies, or Mountain Framework Plan policies and requirements,
2. Areas which qualify for minimum densities greater than 1 unit per 10 acres must meet the following characteristics (unless clustering is used):
    a. Average slopes must be below a 30 percent grade,
    b. Not identified as a moderate-to-high landslide hazard area, and
    c. Access to new development is provided via an existing publicly maintained road or via a new road improved consistent with adopted County standards.

LU-1.8 Encourage Infill Development
The County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

ED-2.11 Industrial Parks
As part of new or updated community plans, the County shall designate sites for industrial development to meet projected demand.

Housing Policy 3.24
When locating agricultural industry in rural areas, a determination should be made that there are transit opportunities and an adequate employment base living within a reasonable distance to the site.

AQ-3.2 Infill near Employment
The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.

AQ-3.6 Mixed Land Uses
The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.

PFS-8.4 Library Facilities and Services
The County shall encourage expansion of library facilities and services as necessary to meet the needs (e.g., internet access, meeting rooms, etc.) of future population growth.

Circulation Policies

Q-3.3 Street Design
The County shall promote street design that provides an environment, which encourages transit use, biking, and pedestrian movements.

LU-7.3 Friendly Streets
The County shall encourage new streets within UDBs to be designed and constructed to not only accommodate traffic, but also serve as comfortable pedestrian and cyclist environments. These should include, but not be limited to:

1. Street tree planting adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and automobiles, where appropriate,
2. Minimize curb cuts along streets,
3. Sidewalks on both sides of streets, where feasible,
4. Bike lanes and walking paths, where feasible on collectors and arterials, and
5. Traffic calming devices such as roundabouts, bulb-outs at intersections, traffic tables, and other comparable techniques.

LU-7.4 Streetscape Continuity
The County shall ensure that streetscape elements (e.g., street signs, trees, and furniture) maintain visual continuity and follow a common image for each community.

LU-1.10 Roadway Access
The County shall require access to public roadways for all new development.

SL-2.1 Designated Scenic Routes and Highways
The County shall protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways by:

1. Requiring development within existing eligible State scenic highway corridors to adhere to land use and design standards and guidelines required by the State Scenic Highway Program,
2. Supporting and encouraging citizen initiatives working for formal designation of eligible segments of State Highway 198 and State Highway 190 as State scenic highways,
3. Formalizing a system of County scenic routes throughout the County (see Figure 7-1), and
4. Requiring development located within County scenic route corridors to adhere to local design guidelines and standards.

SL-4.1 Design of Highways
The County shall work with Caltrans and Tulare County Association of Governments (TCAG) to ensure that the design of SR 99 and other State Highways protects scenic resources and provide access to vistas of working and natural landscapes by:

1. Limiting the construction of sound walls that block views of the County's landscapes (incorporate setbacks to sensitive land uses to avoid noise impacts whenever feasible),

2. Using regionally-appropriate trees and landscaping and incorporating existing landmark trees,
3. Preserving historic and cultural places and vistas,
4. Avoiding excessive cut and fill for roadways along State scenic highways and County scenic routes, and along areas exposed to a large viewing area, and
5. Promote highway safety by identifying appropriate areas for traffic pullouts and rest areas.

SL-4.2 Design of County Roads
The County's reinvestment in rural County roads outside urban areas should, in addition to meeting functional needs and safety needs, preserve the experience of traveling on the County's "country roads" by:

1. Maintaining narrow as possible rights-of-ways,
2. Limiting the amount of curbs, paved shoulders, and other "urban" edge improvements,
3. Preserving historic bridges and signage, and
4. Promote County road safety by identifying appropriate areas for traffic pullout.

TC-1.1 Provision of an Adequate Public Road Network
The County shall establish and maintain a public road network comprised of the major facilities illustrated on the Tulare County Road Systems to accommodate projected growth in traffic volume.

TC-1.2 County Improvement Standards
The County's public roadway system shall be built and maintained consistent with adopted County Improvement Standards, and the need and function of each roadway, within constraints of funding capacity.

TC-1.6 Intermodal Connectivity
The County shall ensure that, whenever possible, roadway, highway, and public transit systems will interconnect with other modes of transportation. Specifically, the County shall encourage the interaction of truck, rail, and air-freight/passenger movements.

TC-1.7 Intermodal Freight Villages
The County shall consider the appropriate placement of intermodal freight villages in locations within the Regional Growth Corridors.

TC-1.8 Promoting Operational Efficiency
The County shall give consideration to transportation programs that improve the operational efficiency of goods movement, especially those that enhance farm-to-market connectivity

TC-1.9 Highway Completion
The County shall support State and Federal capacity improvement programs for critical segments of the State Highway System. Priority shall be given to improvements to State Routes 65, 99, and 198, including widening and interchange projects in the County.

TC-1.10 Urban Interchanges
The County shall work with TCAG to upgrade State highway interchanges from rural to urban standards within UDBs.

TC-1.11 Regionally Significant Intersections
To enhance safety and efficiency, the County shall work to limit the frequency of intersections along regionally significant corridors.

TC-1.12 Scenic Highways and Roads
The County shall work with appropriate agencies to support the designation of scenic highways and roads in the County.

TC-1.16 County Level of Service (LOS) Standards
The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual.

TC-1.18 Balanced System
The County shall strive to meet transportation needs and maintain LOS standards through a balanced Multimodal Transportation Network that provides alternatives to the automobile.

TC-2.3 Amtrak Service
The County shall encourage Amtrak to add passenger service to the Union Pacific corridor in the County.

TC-4.7 Transit Ready Development
The County shall promote the reservation of transit stops in conjunction with development projects in likely or potential locations for future transit facilities.

TC-5.1 Bicycle/Pedestrian Trail System
The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.

TC-5.2 Consider Non-Motorized Modes in Planning and Development
The County shall consider incorporating facilities for non-motorized users, such as bike routes, sidewalks, and trails when constructing or improving transportation facilities and when reviewing new development proposals. For developments with 50 or more dwelling units or non-residential projects with an equivalent travel demand, the feasibility of such facilities shall be evaluated.

TC-5.3 Provisions for Bicycle Use
The County shall work with TCAG to encourage local government agencies and businesses to consider including bicycle access and provide safe bicycle parking facilities at office buildings, schools, shopping centers, and parks.

TC-5.4 Design Standards for Bicycle Routes
The County shall utilize the design standards adopted by Caltrans and as required by the Streets and Highway Code for the development, maintenance, and improvement of bicycle routes.

TC-5.5 Facilities
The County shall require the inclusion of bicycle support facilities, such as bike racks, for new major commercial or employment locations.

TC-5.7 Designated Bike Paths
The County shall support the creation and development of designated bike paths adjacent to or separate from commute corridors.

TC-5.8 Multi-Use Trails
The County shall encourage the development of multi-use corridors (such as hiking, equestrian, and mountain biking) in open space areas, along power line transmission corridors, utility easements, rivers, creeks, abandoned railways, and irrigation canals.

TC-5.9 Existing Facilities
The County shall support the maintenance of existing bicycle and pedestrian facilities.

Housing Policies

LU-3.5 Rural Residential Designations
The County shall not re-zone any new areas for residential development in the RVLP area, unless it can be shown that other objectives, such as buffers and the relationship of the development to surrounding uses, can be achieved.

Housing Guiding Principle 1.1
Endeavor to improve opportunities for affordable housing in a wide range of housing types in the communities throughout the unincorporated area of the County.

Housing Policy 1.11
Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

Housing Policy 1.13
Encourage the utilization of modular units, prefabricated units, and manufactured homes.

Housing Policy 1.14
Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Housing Policy 1.15
Encourage housing counseling programs for low-income homebuyers and homeowners.

Housing Policy 1.16
Review community plans and zoning to ensure they provide for adequate affordable residential development.

Housing Guiding Principle 1.2
Promote equal housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, family status, disability, or any other arbitrary basis.

Housing Guiding Principle 1.3
Strive to meet the housing needs of migrant and non-migrant farmworkers and their families with a suitable, affordable and satisfactory living environment.

Housing Policy 1.31
Encourage the provision of farmworker housing opportunities in conformance with the Employee Housing Act.

Housing Guiding Principle 1.4
Enhance and support emergency shelters and transitional and supportive housing programs that assist the homeless and others in need.

Housing Policy 1.51
Encourage the construction of new housing units for "special needs" groups, including senior citizens, large families, single heads of households, households of persons with physical and/or mental disabilities, minorities, farmworkers, and the homeless in close proximity to transit, services, and jobs.

Housing Policy 1.52
Support and encourage the development and improvement of senior citizen group housing, convalescent homes, and other continuous care facilities.

Housing Policy 1.55
Encourage development of rental housing for large families, as well as providing for other housing needs and types.

Housing Guiding Principle 1.6
Assess and amend County ordinances,

standards, practices and procedures considered necessary to carry out the County's essential housing goal of the attainment of a suitable, affordable and satisfactory living environment for every present and future resident in unincorporated areas.

Housing Policy 2.14
Create and maintain a matrix of Infrastructure Development Priorities for Disadvantaged Unincorporated Communities in Tulare County thorough analysis and investigation of public infrastructure needs and deficits, pursuant to Action Program 9.

Housing Guiding Principle 2.2
Require proposed new housing developments located within the development boundaries of unincorporated communities to have the necessary infrastructure and capacity to support the development.

Housing Policy 2.21
Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

Housing Guiding Principle 3.1
Encourage "smart growth" designed development that serves the unincorporated communities, the environment, and the economy of Tulare County.

Housing Policy 3.11
Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

Housing Policy 3.23
Prepare new and/or updated community plans that provide adequate sites for a variety of types of housing within the development boundaries of community.

Conservation Policies

AG-1.1 Primary Land Use
The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture's real contribution to the conservation of open space and natural resources.

AG-1.4 Williamson Act in UDBs and HDBs
The County shall support non-renewal or cancellation processes that meet State law for lands within UDBs and HDBs.

AG-1.5 Substandard Williamson Act Parcels
The County may work to remove parcels that are less than 10 acres in Prime Farmland and less than 40 Acres in Non-Prime Farmland from Williamson Act Contracts (Williamson Act key term for Prime/Non-Prime).

AG-1.6 Conservation Easements
The County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including "Important Farmlands"), as defined in this Element. This program may require payment of an in-lieu fee sufficient to purchase a farmland conservation easement, farmland deed restriction, or other farmland conservation mechanism as a condition of approval for conservation of important agricultural land to non-agricultural use. If available, the ACEP shall be used for replacement lands determined to be of statewide significance

(Prime or other Important Farmlands), or sensitive and necessary for the preservation of agricultural land, including land that may be a part of a community separator as part of a comprehensive program to establish community separators. The in-lieu fee or other conservation mechanism shall recognize the importance of land value and shall require equivalent mitigation.

AG-1.7 Preservation of Agricultural Lands

The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth Management Plan or similar types of strategies and the identification of growth boundaries for all urban areas located in the County.

AG-1.8 Agriculture within Urban Boundaries

The County shall not approve applications for preserves or regular Williamson Act contracts on lands located within a UDB and/or HDB unless it is demonstrated that the restriction of such land will not detrimentally affect the growth of the community involved for the succeeding 10 years, that the property in question has special public values for open space, conservation, other comparable uses, or that the contract is consistent with the publicly desirable future use and control of the land in question. If proposed within a UDB of an incorporated city, the County shall give written notice to the affected city pursuant to Government Code §51233.

AG-1.10 Extension of Infrastructure into Agricultural Areas

The County shall oppose extension of urban services, such as sewer lines, water lines, or other urban infrastructure, into areas designated for agriculture use unless necessary to resolve a public health situation. Where necessary to address a public health issue, services should be located in public rights-of-way in order to prevent interference with agricultural operations and to provide ease of access for operation and maintenance. Service capacity and length of lines should be designed to prevent the conversion of agricultural lands into urban/suburban uses.

AG-1.11 Agricultural Buffers

The County shall examine the feasibility of employing agricultural buffers between agricultural and non-agricultural uses, and along the edges of UDBs and HDBs. Considering factors include the type of operation and chemicals used for spraying, building orientation, planting of trees for screening, location of existing and future rights-of-way (roads, railroads, canals, power lines, etc.), and unique site conditions.

AG-1.13 Agricultural Related Uses

The County shall allow agriculturally related uses, including value-added processing facilities by discretionary approvals in areas designated Valley or Foothill Agriculture, subject to the following criteria:

1. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
2. The use shall not be sited on productive agricultural lands if less productive land is available in the vicinity;
3. The operational or physical characteristics of the use shall not have a significant adverse impact on water resources or the use or management of surrounding agricultural properties within at least one-quarter (1/4) mile radius;

4. A probable workforce should be located nearby or be readily available; and
5. For proposed value-added agricultural processing facilities, the evaluation under criterion "1" above shall consider the service requirements of the use and the capability and capacity of cities and unincorporated communities to provide the required services.

AG-1.16 Schools in Agricultural Zones
The County shall discourage the location of new schools in areas designated for agriculture, unless the School District agrees to the construction and maintenance of all necessary infrastructure impacted by the project.

AG-2.6 Biotechnology and Biofuels
The County shall encourage the location of industrial and research oriented businesses specializing in biotechnologies and biofuels that can enhance agricultural productivity, enhance food-processing activities in the County, provide for new agriculturally related products and markets, or otherwise enhance the agricultural sector in the County.

LU-7.12 Historic Buildings and Areas
The County shall encourage preservation of buildings and areas with special and recognized historic, architectural, or aesthetic value. New development should respect architecturally and historically significant buildings and areas. Landscaping, original roadways, sidewalks, and other public realm features of historic buildings or neighborhoods shall be restored or repaired wherever feasible.

LU-7.13 Preservation of Historical Buildings
The County shall encourage and support efforts by local preservation groups to identify and rehabilitate historically significant buildings.

LU-7.14 Contextual and Compatible Design
The County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion, which is compatible with the scale of surrounding structures.

LU-7.15 Energy Conservation
The County shall encourage the use of solar power and energy conservation building techniques in all new development.

LU-7.16 Water Conservation
The County shall encourage the inclusion of "extra-ordinary' water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development

Housing Guiding Principle 4.1
Support and encourage County ordinances, standards, practices and procedures that promote residential energy conservation.

Housing Policy 4.13
Promote energy efficiency and water conservation.

Housing Policy 4.21
Promote energy conservation opportunities in new residential development.

Housing Policy 5.24
Encourage the development of suitable replacement housing when occupied housing units are demolished due to public action.

ERM-1.1 Protection of Rare and Endangered Species

The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.

ERM-1.2 Development in Environmentally Sensitive Areas

The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in areas with moderate to high potential for sensitive habitat.

ERM-1.4 Protect Riparian Areas

The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.

ERM-1.8 Open Space Buffers

The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state.

ERM-4.1 Energy Conservation and Efficiency Measures

The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new construction and renovation of existing structures in accordance with State law.

ERM-4.2 Streetscape and Parking Area Improvements for Energy Conservation

The County shall promote the planting and maintenance of shade trees along streets and within parking areas of new urban development to reduce radiation heating.

ERM-7.1 Soil Conservation

The County of Tulare shall establish the proper controls and ordinances for soil conservation.

WR-1.4 Conversion of Agricultural Water Resources

For new urban development, the County shall discourage the transfer of water used for agricultural purposes (within the prior ten years) for domestic consumption except in the following circumstances:

1. The water remaining for the agricultural operation is sufficient to maintain the land as an economically viable agricultural use,
2. The reduction in infiltration from agricultural activities as a source of groundwater recharge will not significantly impact the groundwater basin.

WR-1.5 Expand Use of Reclaimed Wastewater

To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts

WR-1.6 Expand Use of Reclaimed Water

The County shall encourage the use of tertiary treated wastewater and household gray water for irrigation of agricultural lands, recreation and open space areas, and large landscaped areas as a means of reducing demand for groundwater resources.

WR-3.3 Adequate Water Availability

The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

HS-9.2 Walkable Communities

The County shall require where feasible, the development of parks, open space, sidewalks and walking and biking paths that promote physical activity and discourage automobile dependency in all future communities.

PF-1.4 Available Infrastructure

The County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available, and that there are adequate provisions for long-term management and maintenance of infrastructure and identified water supplies.

Open-Space Policies

LU-2.3 Open Space Character

The County shall require that all new development requiring a County discretionary approval, including parcel and subdivision maps, be planned and designed to maintain the scenic open space character of open space resources including, but not limited to, agricultural areas, rangeland, riparian areas, etc., within the view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible and use design, construction and maintenance techniques that minimize the visibility of structures on hilltops, hillsides, ridgelines, steep slopes, and canyons.

SL-1.3 Watercourses

The County shall protect visual access to, and the character of, Tulare County's scenic rivers, lakes, and irrigation canals by:

1. Locating and designing new development to minimize visual impacts and obstruction of views of scenic watercourses from public lands and right-of-ways, and
2. Maintaining the rural and natural character of landscape viewed from trails and watercourses used for public recreation.

ERM-5.1 Parks as Community Focal Points

The County shall strengthen the role of County parks as community focal points by providing community center/recreation buildings to new and existing parks, where feasible.

ERM-5.2 Park Amenities

The County shall provide a broad range of active and passive recreational opportunities within community parks. When possible, this should include active sports fields and facilities, community center/recreation buildings, children's play areas, multi-use areas and trails, sitting areas, and other specialized uses as appropriate.

ERM-5.3 Park Dedication Requirements

The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.

ERM-5.5 Collocated Facilities

The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.

ERM-5.6 Location and Size Criteria for Parks

Park types used in Tulare County are defined as follows:

- **Neighborhood Play Lots (Pocket Parks)**. The smallest park type, these are typically included as part of a new development to serve the neighborhood in which they are contained. Typical size is one acre or less. If a park of this type is not accessible to the general public, it cannot be counted towards the park dedication requirements of the County. Pocket Parks can be found in communities, hamlets, and other unincorporated areas.
- **Neighborhood Parks**. Neighborhood parks typically contain a tot lot and playground for 2-5 year olds and 5-12 year olds, respectively, one basketball court or two half-courts, baseball field(s), an open grassy area for informal sports activities (for example, soccer), and meandering concrete paths that contain low-level lighting for walking or jogging. In addition, neighborhood parks typically have picnic tables and a small group picnic shelter. These park types are typically in the range of 2 to 15 acres and serve an area within a ½-mile radius. Neighborhood parks can be found in communities, hamlets, and other unincorporated areas.
- **Community Parks**. Community parks are designed to serve the needs of the community as a whole. These facilities can contain the same facilities as the neighborhood park. In addition, these parks can contain sports facilities with night lighting, community centers, swimming pools, and facilities of special interest to the community. These parks are typically 15 to 40 acres in size and serve an area within a 2-mile radius. Community parks can be found in communities, planned community areas, and large hamlets.
- **Regional Parks**. Regional parks are facilities designed to address the needs of the County as a whole. These facilities may have an active recreation component (play area, group picnic area, etc.), but the majority of their area is maintained for passive recreation (such as hiking or horseback riding), and natural resource enjoyment. Regional parks are typically over 200 acres in size, but smaller facilities may be appropriate for specific sites of regional interest.

The following guidelines should be observed in creating and locating County parks:

1. The County shall strive to maintain an overall standard of five or more acres of County-owned improved parkland per

1,000 population in the unincorporated portions of the County,
2. Neighborhood play lots (pocket parks) are encouraged as part of new subdivision applications as a project amenity, but are not included in the calculation of dedication requirements for the project,
3. Neighborhood parks at three acres per 1,000 population, if adjoining an elementary school and six acres per 1,000 population if separate [ERME IV-C; Open Space; Policy 3; Pg. 101],
4. Community parks at one-acre per 1,000 population if adjoining a high school and two acres per 1,000 population if separate [ERME IV-C; Open Space; Policy 4; Pg. 101],
5. Regional parks at one-acre per 1,000 population,
6.
7. Only public park facilities shall be counted toward Countywide parkland standards, and
8. A quarter mile walking radius is the goal for neighborhood parks.

ERM-5.12 Meet Changing Recreational Needs

The County shall promote the continued and expanded use of national and State forests, parks, and other recreational areas to meet the recreational needs of County residents.

ERM-5.13 Funding for Recreational Areas and Facilities

The County shall support the continued maintenance and improvement of existing recreational facilities and expansion of new recreational facilities opportunities for County, State, and Federal lands. The County shall strive to obtain adequate funding to improve and maintain existing parks, as well as construct new facilities.

ERM-5.15 Open Space Preservation

The County shall preserve natural open space resources through the concentration of development in existing communities, use of cluster development techniques, maintaining large lot sizes in agricultural areas, discouraging conversion of lands currently used for agricultural production, limiting development in areas constrained by natural hazards, and encouraging agricultural and ranching interests to maintain natural habitat in open space areas where the terrain or soil is not conducive to agricultural production.

HS-9.1 Healthy Communities

To the maximum extent feasible, the County shall strive through its land use decisions to promote community health and safety for all neighborhoods in the County by encouraging patterns of development that are safe and influence crime prevention, promote a high-quality physical environment and encourage physical activity by means such as sidewalks and walking and biking paths that discourage automobile dependency in existing communities.

Noise Policies

HS-8.7 Inside Noise

The County shall ensure that in instances where the windows and doors must remain closed to achieve the required inside acoustical isolation, mechanical ventilation or air conditioning is provided.

HS-8.8 Adjacent Uses

The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote

the public health, safety and welfare of the County.

HS-8.9 County Equipment
The County shall strive to purchase equipment that complies with noise level performance standards set forth in the Health and Safety Element.

HS-8.10 Automobile Noise Enforcement
The County shall encourage the CHP, Sheriff's office, and local police departments to actively enforce existing sections of the California Vehicle Code relating to adequate vehicle mufflers, modified exhaust systems, and other amplified noise.

HS-8.11 Peak Noise Generators
The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.14 Sound Attenuation Features
The County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts.

HS-8.15 Noise Buffering
The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.

Safety Policies

HS-1.1 Maintain Emergency Public Services
The County shall ensure that during natural catastrophes and emergency situations, the County can continue to provide essential emergency services.

HS-1.9 Emergency Access
The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

HS-1.10 Emergency Services Near Assisted Living Housing
In approving new facilities, such as nursing homes, housing for the elderly and other housing for the mentally and physically infirm, to the extent possible, the County shall ensure that such facilities are located within reasonable distance of fire and law enforcement stations.

HS-5.2 Development in Floodplain Zones
The County shall regulate development in the 100-year floodplain zones as designated on maps prepared by FEMA in accordance with the following:

1. Critical facilities (those facilities which should be open and accessible during emergencies) shall not be permitted.
2. Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible.
3. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.8 Road Location
The County shall plan and site new roads to minimize disturbances to banks and existing channels and avoid excessive cuts and accumulations of waste soil and vegetative debris near natural drainage ways.

HS-5.9 Floodplain Development Restrictions
The County shall ensure that riparian areas and drainage areas within 100-year floodplains are free from development that may adversely impact floodway capacity or characteristics of natural/riparian areas or natural groundwater recharge areas.

HS-5.10 Flood Control Design
The County shall evaluate flood control projects involving further channeling, straightening, or lining of waterways until alternative multipurpose modes of treatment, such as wider berms and landscaped levees, in combination with recreation amenities, are studied.

HS-5.11 Natural Design
The County shall encourage flood control designs that respect natural curves and vegetation of natural waterways while retaining dynamic flow and functional integrity.

HS-7.4 Upgrading for Streets and Highways
The County shall evaluate and upgrade vital streets and highways to an acceptable level for emergency services.

PFS-7.1 Fire Protection
The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.6 Provision of Station Facilities and Equipment
The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.11 Locations of Fire and Sheriff Stations/Sub-stations
The County shall strive to locate fire and sheriff sub-stations in areas that ensure the minimum response times to service calls.

PFS-7.12 Design Features for Crime Prevention and Reduction
The County shall promote the use of building and site design features as means for crime prevention and reduction.

PFS-8.3 Location of School Sites
The County shall work with school districts and land developers to locate school sites consistent with current and future land uses. The County shall also encourage siting new schools near the residential areas that they serve and with access to safe pedestrian and bike routes to school.

<u>Other</u>

PF-2.7 Improvement Standards in Communities
The County shall require development within the designated UDBs to meet an urban standard for improvements. Typical improvements shall include curbs, gutters, sidewalks, and community sewer and water systems.

ERM-6.3 Alteration of Sites with Identified Cultural Resources
When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development should be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and

mitigation measures proposed for any impacts the development may have on the resource.

HS-8.5 State Noise Standards
The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multi-family dwellings, condominiums, hotels, or motels. Where it is not possible to reduce exterior noise levels within an acceptable range the County shall require the application of noise reduction technology to reduce interior noise levels to an acceptable level.

HS-8.6 Noise Level Criteria
The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).

WR-3.9 Establish Critical Water Supply Areas
The County shall designate Critical Water Supply Areas to include the specific areas used by a municipality or community for its water supply system, areas critical to groundwater recharge, and other areas possessing a vital role in the management of the water resources in the County.

PFS-6.1 Telecommunications Services
The County shall work with telecommunication providers to ensure that all residents and businesses have access to telecommunications services, including broadband internet service. To maximize access to inexpensive telecommunications services, the County shall encourage marketplace competition from multiple service providers.

PFS-8.4 Library Facilities and Services
The County shall encourage expansion of library facilities and services as necessary to meet the needs (e.g., internet access, meeting rooms, etc.) of future population growth.

PFS-8.5 Government Facilities in Community Centers
The County shall actively support development and expansion of federal, State, County, districts, and other governmental offices and facilities where infrastructure exists within community core areas.

S-9.1 Expansion of Gas and Electricity Facilities
The County shall coordinate with gas and electricity service providers to plan the expansion of gas and electrical facilities to meet the future needs of County residents.

General Plan Policies that Relate to Health

PF-2.7 Improvement Standards in Communities
The County shall require development within the designated UDBs to meet an urban standard for improvements. Typical improvements shall include curbs, gutters, sidewalks, and community sewer and water systems.

Land Use Element

LU-1.1 Smart Growth and Healthy Communities
The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development.

LU-1.2 Innovative Development
The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

LU-1.3 Prevent Incompatible Uses
The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.

LU-1.4 Compact Development
The County shall actively support the development of compact mixed-use projects that reduce travel distances.

LU- 1.5 Paper Subdivision Consolidations
The County shall encourage consolidation of paper parcels/subdivisions, especially those lots that are designated Valley Agriculture (VA), Foothill Agriculture (FA), or Resource Conservation (RC), are irregular in shape, inadequate in size for proper use, or lack infrastructure.

LU-1.6 Permitting Procedures and Regulations
The County shall continue to ensure that its permitting procedures and regulations are consistent and efficient.

LU-1.7 Development on Slopes
The County shall require a preliminary soils report for development projects in areas with shallow or unstable soils or slopes in excess of 15 percent. If the preliminary soil report indicates soil conditions could be unstable, a detailed geologic/hydrologic report by a registered geologist, civil engineer, or engineering geologist shall be

required demonstrating the suitability of any proposed or additional development.

LU-1.8 Encourage Infill Development
The County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-1.10 Roadway Access
The County shall require access to public roadways for all new development.

LU-3.1 Residential Developments
The County shall encourage new major residential development to locate near existing infrastructure for employment centers, services, and recreation.

LU-3.3 High-Density Residential Locations
The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

LU-3.6 Project Design
The County shall require residential project design to consider natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses. Residential densities and lot patterns will be determined by these and other factors. As a result, the maximum density specified by General Plan designations or zoning for a given parcel of land may not be attained.

LU-7.3 Friendly Streets
The County shall encourage new streets within UDBs to be designed and constructed to not only accommodate traffic, but also serve as comfortable pedestrian and cyclist environments. These should include, but not be limited to:

1. Street tree planting adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and automobiles, where appropriate,
2. Minimize curb cuts along streets,
3. Sidewalks on both sides of streets, where feasible,
4. Bike lanes and walking paths, where feasible on collectors and arterials, and
5. Traffic calming devices such as roundabouts, bulb-outs at intersections, traffic tables, and other comparable techniques.

LU-7.5 Crime Prevention through Design
The County shall encourage design of open space areas, bicycle and pedestrian systems, and housing projects so that there is as much informal surveillance by people as possible to deter crime.

LU-7.15 Energy Conservation
The County shall encourage the use of solar power and energy conservation building techniques in all new development.

LU-7.16 Water Conservation
The County shall encourage the inclusion of "extra-ordinary' water conservation and demand management measures for residential, commercial, and industrial

indoor and outdoor water uses in all new urban development.

Housing Element

Housing Policy 1.51
Encourage the construction of new housing units for "special needs" groups, including senior citizens, large families, single heads of households, households of persons with physical and/or mental disabilities, minorities, farmworkers, and the homeless in close proximity to transit, services, and jobs.

Housing Policy 3.12
Support locally initiated programs to provide neighborhood parks and recreational facilities for residential areas within unincorporated communities.

Housing Policy 3.13
Encourage subdivision and housing unit design, which provides for a reasonable level of safety and security.

Housing Policy 3.16
Actively seek federal, state, and private foundation grant funds for park and recreation facilities in unincorporated areas, including dual-use storm drainage ponding basins/recreation parks.

Housing Policy 4.21
Promote energy conservation opportunities in new residential development.

Housing Policy 4.22
Enforce provisions of the Subdivision Map Act regulating energy-efficient subdivision design.

Housing Policy 5.21
Administer and enforce the relevant portions of the Health and Safety Code.

Housing Policy 5.26
Prohibit concentrations of dwelling units near potentially incompatible agricultural uses as defined in the Animal Confinement Facilities Plan.

Environmental Resources Element

ERM-5.2 Park Amenities
The County shall provide a broad range of active and passive recreational opportunities within community parks. When possible, this should include active sports fields and facilities, community center/recreation buildings, children's play areas, multi-use areas and trails, sitting areas, and other specialized uses as appropriate.

Air Quality Element

AQ-1.3 Cumulative Air Quality Impacts
The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility
The County shall evaluate the compatibility of industrial or other developments, which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.7 Support Statewide Climate Change Solutions

The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan

The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-2.2 Indirect Source Review

The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:

1. Providing bicycle access and parking facilities,
2. Increasing density,
3. Encouraging mixed use developments,
4. Providing walkable and pedestrian-oriented neighborhoods,
5. Providing increased access to public transportation,
6. Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and
7. Establishing telecommuting programs or satellite work centers.

AQ-2.3 Transportation and Air Quality

When developing the regional transportation system, the County shall work with TCAG to comprehensively study methods of transportation, which may contribute to a reduction in air pollution in Tulare County. Some possible alternatives that should be studied are:

1. Commuter trains (Light Rail, Amtrak, or High Speed Rail) connecting with Sacramento, Los Angeles, and San Francisco, with attractive services scheduled up and down the Valley,
2. Public transportation such as buses and light rail, to serve between communities of the Valley, publicly subsidized if feasible,
3. Intermodal public transit such as buses provided with bicycle racks, bicycle parking at bus stations, bus service to train stations and airports, and park and ride facilities, and
4. Community transportation systems supportive of alternative transportation modes, such as cycling or walking trails,

with particular attention to high-density areas.

AQ-3.2 Infill near Employment
The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.

AQ-3.3 Street Design
The County shall promote street design that provides an environment, which encourages transit use, biking, and pedestrian movements.

AQ-3.4 Landscape
The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO_2, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.

AQ-3.5 Alternative Energy Design
The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses
The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.

Health and Safety Element

HS-1.4 Building and Codes
Except as otherwise allowed by State law, the County shall ensure that all new buildings intended for human habitation are designed in compliance with the latest edition of the California Building Code, California Fire Code, and other adopted standards based on risk (e.g., seismic hazards, flooding), type of occupancy, and location (e.g., floodplain, fault).

HS-1.5 Hazard Awareness and Public Education
The County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures.

HS-1.6 Public Safety Programs
The County shall promote public safety programs, including neighborhood watch programs, child identification and fingerprinting, public awareness and prevention of fire hazards, and other public education efforts.

HS-1.7 Safe Housing and Structures
The County shall continue to seek grant funding for the rehabilitation of deteriorated and dilapidated structures and provide available information regarding housing programs and other public *services.*

HS-1.9 Emergency Access
The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for

emergency equipment and provide alternate routes for evacuation.

HS-1.10 Emergency Services near Assisted Living Housing
In approving new facilities, such as nursing homes, housing for the elderly and other housing for the mentally and physically infirm, to the extent possible, the County shall ensure that such facilities are located within reasonable distance of fire and law enforcement stations.

HS-4.3 Incompatible Land Uses
The County shall prevent incompatible land uses near properties that produce or store hazardous waste.

HS-4.4 Contamination Prevention
The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-4.5 Increase Public Awareness
The County shall work to educate the public about household hazardous waste and the proper method of disposal.

HS-4.6 Pesticide Control
The County shall monitor studies of pesticide use and the effects of pesticide on residents and wildlife and require mitigation of the effects wherever feasible and appropriate.

HS-4.8 Hazardous Materials Studies
The County shall ensure that the proponents of new development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project. Recommendations required to satisfy federal or State cleanup standards outlined in the studies will be implemented as part of the construction phase for each project.

HS-5.1 Development Compliance with Federal, State, and Local Regulations
The County shall ensure that all development within the designated floodway or floodplain zones conforms with FEMA regulations and the Tulare County Flood Damage Prevention Ordinance.

New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.2 Development in Floodplain Zones
The County shall regulate development in the 100-year floodplain zones as designated on maps prepared by FEMA in accordance with the following:

4. Critical facilities (those facilities, which should be open and accessible during emergencies) shall not be permitted.
5. Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible.

6. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-8.5 State Noise Standards
The County shall enforce the State Noise Insulation Standards (California

Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multi-family dwellings, condominiums, hotels, or motels. Where it is not possible to reduce exterior noise levels within an acceptable range, the County shall require the application of noise reduction technology to reduce interior noise levels to an acceptable level.

HS-9.1 Healthy Communities
To the maximum extent feasible, the County shall strive through its land use decisions to promote community health and safety for all neighborhoods in the County by encouraging patterns of development that are safe and influence crime prevention, promote a high-quality physical environment and encourage physical activity by means such as sidewalks and walking and biking paths that discourage automobile dependency in existing communities.

HS-9.2 Walkable Communities
The County shall require where feasible, the development of parks, open space, sidewalks and walking and biking paths that promote physical activity and discourage automobile dependency in all future communities.
Water Resource Element

WR-2.1 Protect Water Quality
All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement
The County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.

WR-2.3 Best Management Practices (BMPs)
The County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.

Transportation and Circulation Element

TC-1.18 Balanced System
The County shall strive to meet transportation needs and maintain LOS standards through a balanced Multimodal Transportation Network that provides alternatives to the automobile.

TC-1.19 Balanced Funding
The County shall promote a balanced approach to the allocation of transportation funds to optimize the overall County transportation system.

TC-4.1 Transportation Programs
The County shall support the continued coordination of transportation programs

provided by social service agencies, particularly those serving elderly and/or handicapped.

TC-4.2 Determine Transit Needs
The County will continue to work with TCAG, cities, and communities in the County to evaluate and respond to public transportation needs.

TC-4.3 Support Tulare County Area Transit
The County shall request the support of TCAG for development of transit services outlined in the County's Transit Development Plan (TDP). Efforts to expand Tulare County Area Transit should be directed towards:

1. Encouraging new and improving existing transportation services for the elderly and disabled, and
2. Providing intercommunity services between unincorporated communities and cities.

TC-4.4 Nodal Land Use Patterns that Support Public Transit
The County shall encourage land uses that generate higher ridership including; high density residential, employment centers, schools, personal services, administrative and professional offices, and social/recreational centers, to be clustered within a convenient walking distance of one another.

TC-5.1 Bicycle/Pedestrian Trail System
The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.

TC-5.2 Consider Non-Motorized Modes in Planning and Development
The County shall consider incorporating facilities for non-motorized users, such as bike routes, sidewalks, and trails when constructing or improving transportation facilities and when reviewing new development proposals. For developments with 50 or more dwelling units or non-residential projects with an equivalent travel demand, the feasibility of such facilities shall be evaluated.

TC-5.3 Provisions for Bicycle Use
The County shall work with TCAG to encourage local government agencies and businesses to consider including bicycle access and provide safe bicycle parking facilities at office buildings, schools, shopping centers, and parks.

Public Facilities and Services Element

PFS-1.1 Existing Development
The County shall generally give priority for the maintenance and upgrading of County-owned and operated facilities and services to existing development in order to prevent the deterioration of existing levels-of-service.

PFS-1.3 Impact Mitigation
The County shall review development proposals for their impacts on infrastructure (for example, sewer, water, fire stations, libraries, streets, etc). New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. The lack of available public or

private services or adequate infrastructure to serve a project, which cannot be satisfactorily mitigated by the project, may be grounds for denial of a project or cause for the modification of size, density, and/or intensity of the project.

PFS-1.4 Standards of Approval

The County should not approve any development unless the following conditions are met:

1. The applicant can demonstrate all necessary infrastructure will be installed and adequately financed,
2. Infrastructure improvements are consistent with adopted County infrastructure plans and standards, and
3. Funding mechanisms are provided to maintain, operate, and upgrade the facilities throughout the life of the project.

PFS-1.5 Funding for Public Facilities

The County shall implement programs and/or procedures to ensure that funding mechanisms necessary to adequately cover the costs related to planning, capital improvements, maintenance, and operations of necessary public facilities and services are in place, whether provided by the County or another entity.

PFS-1.6 Funding Mechanisms

The County shall use a wide range of funding mechanisms, such as the following, to adequately fund capital improvements, maintenance, and on-going operations for publicly owned and/or operated facilities:

1. Establishing appropriate development impact fees,
2. Establishing assessment districts, and
3. Pursuing grant funding.

PFS-1.7 Coordination with Service Providers

The County shall work with special districts, community service districts, public utility districts, mutual water companies, private water purveyors, sanitary districts, and sewer maintenance districts to provide adequate public facilities and to plan/coordinate, as appropriate, future utility corridors in an effort to minimize future land use conflicts.

PFS-1.8 Funding for Service Providers

The County shall encourage special districts, including community service districts and public utility districts to:

1. Institute impact fees and assessment districts to finance improvements,
2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and
3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems.

PFS-1.9 New Special Districts

When feasible, the County shall support the establishment of new special districts, including community service districts and public utility districts, to assume responsibility for public facilities and services.

PFS-1.10 Homeowner Associations

The County shall support the creation of homeowner associations, condominium associations, or other equivalent organizations to assume responsibility for specific public facilities and services.

PFS-1.11 Facility Sizing
The County shall ensure that publicly-owned and operated facilities are designed to meet the projected capacity needed in their service area to avoid the need for future replacement to achieve upsizing. For facilities subject to incremental sizing, the initial design shall include adequate land area and any other elements to easily expand in the future.

PFS-1.12 Security
The County shall seek to minimize vulnerability of public facilities to natural and man-made hazards and threats.

PFS-2.1 Water Supply
The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development.

PFS-2.2 Adequate Systems
The County shall review new development proposals to ensure that the intensity and timing of growth will be consistent with the availability of adequate production and delivery systems. Projects must provide evidence of adequate system capacity prior to approval.

PFS-2.3 Well Testing
The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.4 Water Connections
The County shall require all new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing water district service areas, or zones of benefit, to connect to the community water system, where such system exists. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the water system when service becomes readily available.

PFS-2.5 New Systems or Individual Wells
Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.

PFS-3.1 Private Sewage Disposal Standards
The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.2 Adequate Capacity
The County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity.

PFS-3.3 New Development Requirements
The County shall require all new development, within UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing wastewater district service areas, or

zones of benefit, to connect to the wastewater system, where such systems exist. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the wastewater system when service becomes readily available.

PFS-3.4 Alternative Rural Wastewater Systems

The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-3.7 Financing

The County shall cooperate with special districts when applying for State and federal funding for major wastewater related expansions/upgrades when such plans promote the efficient solution to wastewater treatment needs for the area and County.

PFS-4.2 Site Improvements

The County shall ensure that new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, and Area Plans includes adequate stormwater drainage systems. This includes adequate capture, transport, and detention/retention of stormwater.

PFS-4.3 Development Requirements

The County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance.

PFS-4.4 Stormwater Retention Facilities

The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge.

PFS-4.5 Detention/Retention Basins Design

The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible.

PFS-4.6 Agency Coordination

The County shall work with the Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge.

PFS-4.7 NPDES Enforcement

The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.1 Land Use Compatibility with Solid Waste Facilities

The County shall ensure that solid waste facility sites (for example, landfills) are

protected from the encroachment by

Fire Staffing and Reponses Time Standards			
	Demographics	**Staffing/ Response Time**	**% of Calls**
Urban	>1,000 people/sq. mi.	15 FF/9 min.	90
Suburban	500-100 people/sq. mi.	10 FF/10 min.	80
Rural	<500 people/sq. mi.	6 FF/14 min.	80
Remote*	Travel Dist.>8 min.	4 FF/no specific response time	90

*Upon assembling the necessary resources at the emergency scene, the fire department should have the capacity to safety commence an initial attach within 2 minutes, 90% of the time.
FF: fire fighters

sensitive and/or incompatible land uses.

PFS-5.8 Hazardous Waste Disposal Capabilities

The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

PFS-7.2 Fire Protection Standards

The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.5 Fire Staffing and Response Time Standards

The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards.

PFS-7.12 Design Features for Crime Prevention and Reduction

The County shall promote the use of building and site design features as means for crime prevention and reduction.

PFS-8.2 Joint Use Facilities and Programs

The County shall encourage the development of joint school facilities, recreation facilities, and educational and service programs between school districts and other public agencies.

PFS-8.3 Location of School Sites

The County shall work with school districts and land developers to locate school sites consistent with current and future land uses. The County shall also encourage siting new schools near the residential areas that they serve and with access to safe pedestrian and bike routes to school.

PFS-9.1 Expansion of Gas and Electricity Facilities

The County shall coordinate with gas and electricity service providers to plan the expansion of gas and electrical facilities to meet the future needs of County residents.

PFS-9.2 Appropriate Siting of Natural Gas and Electric Systems

The County shall coordinate with natural gas and electricity service providers to locate and design gas and electric systems that minimize impacts to existing and future residents.

PFS-9.3 Transmission Corridors

The County shall work with the Public Utilities Commission and power utilities so that transmission corridors meet the following minimum requirements:

1. Transmission corridors shall be located to avoid health impacts on residential lands and sensitive receptors, and
2. Transmission corridors shall not impact the economic use of adjacent properties.

Goals, Objectives, and Policies specific to Cutler-Orosi

Goals, objectives and policies are the fundamental building blocks of the planning process. Goals describe the desirable results to which the plan is committed while objectives describe the intermediate steps or achievements, which must be taken to reach the goals. Policies describe more specific actions or processes which must be undertaken in order to achieve objectives.

Taken as a whole, goals, objectives and policies provide the guidelines as to how the community is to grow in terms of type, quantity and quality of development. The goals, objectives and policies are an integral part of the plan itself and the final land use map and plan description must reflect the goals, objectives and policies of the community. The plan map then is a graphic portrayal of what goals, objectives and policies are intended to accomplish.

The goals, objectives and policies of this community plan are divided into four categories. The four areas are: Community Development, Housing, Economic Base, and Environmental Quality.

****** Draft Ground Water Management Act Policy ********

Goal: That the County and Kings River East Groundwater Sustainability Agency work collaboratively under the Tulare County General Plan to assist the Cutler PUD and Orosi PUD in establishing conservation measures and credits in order to sustainably grow water and sewer infrastructure consistent with the Projected Growth Rates considered in the General Plan of Tulare County.

Objective: To not inhibit the Cutler-Orosi Community Plan projected growth rates due to the Groundwater Management Act. Instead to use thoughtful localized conservation measures, funding and credits for storm water retention / groundwater reclamation that can be utilized by the School District and PUD's in order meet the demands of the Kings River East GSA and the Management Area.

Policy 1: The County as a member of the Kings River East GSA will use its role as a GSA member to assist the Cutler PUD, Orosi PUD, and Cutler-Orosi Joint Unified School District to enhance and establish conservation measures that reduce the demand requirements consistent with previous drought measures (2014-15) that are still the law of California, and under the precepts of SGMA.

Policy 2: The Cutler PUD, the Orosi PUD, and Cutler-Orosi Joint Unified School District should work with the Kings River East GSA to establish credits for storm water retention / ground water reclamation consistent with the County General Plan.

Policy 3: The Cutler PUD and the Orosi PUD seek and be given credits consistent with the Kings River East GSA's ultimate definitions of available reclamation credits for recycled wastewater effluent land applications.

Policy 4: That the Cutler-Orosi Joint Unified School District be given credits for any ground water

reclamation they can supply through utilization of their existing storm water detention basins.

Community Development

GOAL I: Foster a cohesive community with easy access to necessary services and support facilities

Objective I: Prevent premature urban-type development on agriculturally productive lands.

Policies:

1. Encourage in-filling of vacant land and compatible development on underdeveloped land as a priority before development of agriculturally productive lands.
2. The County shall carefully coordinate the extension of water and sewer services in the Plan Area with the Cutler PUD and the Orosi PUD to promote orderly and efficient development patterns.

GOAL II: Avoid land use conflicts through planning separation of uses.

Objective II: Promote concentrations of similar or compatible uses.

Policies:

1. Promote a concentration of industrial and commercial activities within selected areas to allow for cost efficient provision of necessary services and to protect residential neighborhoods.
2. The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.
3. The County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion, which is compatible with the scale of surrounding structures.
4. The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.
5. Land well suited for industrial development because of access, availability of infrastructure and proximity to similar land uses should be designated for industry and protected from the encroachment of incompatible uses.
6. Establish areas zoned exclusively for industry, commerce and residences consistent with the policies in this plan.
7. Phase-out existing nonconforming commercial and industrial concerns within planned residential areas through appropriate zoning amortization procedures.
8. Locate high-density residential uses in close proximity to planned shopping areas.
9. Require public, quasi-public and high density residential uses to locate where direct access to major streets is available.
10. The County shall ensure that solid waste facility sites (for example, landfills) are protected from the encroachment by sensitive and/or incompatible land uses.
11. The County shall cooperate with all affected school districts to provide the highest quality educational services and school facilities possible.
12. The County shall work with the Cutler-Orosi Unified School District in facilitating the location and establishment of new school sites, or expansion of existing sites, as needed.
13. The County shall work with the Cutler-Orosi School District to provide safe routes to school.

14. The County will solicit recommendations from all interested public agencies on matters regarding the Cutler-Orosi Community Plan.
15. The Cutler-Orosi Community Plan should be reviewed every five years to determine if amendments are appropriate.
16. When considering any land use proposal, capital expenditure or other matters of community importance, the County will request input from the local service district and other affected agencies.

Objective II: Provide for appropriate buffers between areas set aside for commercial activities and single family residential uses.

Policies:

1. Require adequate setbacks, side and rear yards, landscaping and screening between living and working areas.
2. Utilize roadways, railroad right of ways and other physical features to separate planned living and working areas.

Objective II: Encourage land uses adjacent to State Route 63 and Avenue 416 which are consistent with noise impacts.

Policies:

1. Encourage commercial and/or industrial development to locate adjacent to SR 216 where access is appropriate for such development.
2. Require installation of walls, berms or heavy planting along SR 63 in conjunction with any new residential development.
3. Discourage new residential development on vacant lots within areas proposed for commercial and industrial development.
4. Encourage the eventual conversion of existing residential uses within areas proposed for commercial and industrial development to nonresidential uses; except living quarters used in conjunction with a business.
5. Phase-out existing non-conforming commercial and industrial uses within planned residential areas by zoning such areas residential, and by enforcement of local zoning regulations pertaining to illegal buildings and uses.
6. The County shall designate and zone sufficient amounts of land to accommodate existing and projected industrial, commercial, residential, and public (e.g., parks and recreational) needs of the community.
7. Provide for appropriate buffers between areas set aside for commercial activities and single family residential uses.

GOAL III: Achieve development densities consistent with levels of available service.

Objective I: Urbanization in the planning areas should be contiguous and compact.

Policies:

1. The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.
2. The County shall review development proposals for their impacts on infrastructure (for example, sewer, water, fire stations, libraries, streets, etc.). New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. The lack of available public or private services or adequate infrastructure to serve a project, which cannot be satisfactorily mitigated by the project, may

be grounds for denial of a project or cause for the modification of size, density, and/or intensity of the project.

3. The extension of water and sewer facilities into the planning area shall be coordinated with the policies of this Plan and the goals and policies of the Tulare County General Plan. Development in the planning area shall pay their fair share for services.

Objective II: Encourage merger of existing vacant substandard lots within the townsite of Cutler-Orosi.

Policies:

1. Conduct a study of the Cutler-Orosi townsite area to determine the impact of a comprehensive vacant lot merger action and undertake such a merger, if feasible.

GOAL IV: Coordinate Community Development Decisions with the Cutler PUD and Orosi PUD.

Objective I: Ensure that all development can be served by the Cutler Public Utility District (PUD) and Orosi PUD during the planning period.

Policies:

1. Coordinate zoning with availability of utilities and community services.
2. Promote commercial and industrial development with wastewater discharge characteristics, which can be accommodated by the Cutler PUD and Orosi PUD.
3. Encourage industries with excessive effluent to pre-treat Cutler-Orosi wastewater system.
4. Encourage coordination between developers and the Cutler-Orosi throughout the application and development process to prevent time delays and to assure that the Cutler-Orosi can accommodate the needs of any proposed development.
5. Before the issuance of any land use permit, the Tulare County Resource Management Agency must receive confirmation from the Cutler-Orosi Wastewater Treatment Plant that water and sewer service requirements can be accommodated.
6. Assist the Cutler-Orosi Wastewater Treatment Plant in applications for grant funds to carry out their capital improvement program for providing, maintaining and improving their sewer and water systems to serve new and existing developments, which implement the goals and objectives of this Plan and of the Tulare County General Plan.
7. Prohibit to the extent allowed by law all development from holding, diverting and/or disposing of storm water run-off at locations, or in such a manner, as to cause groundwater recharge contributable to raising the groundwater to an unsafe level in the vicinity of the Cutler/ Orosi wastewater treatment facilities.
8. Investigate the necessity of preparing a drainage plan, within five years of adoption of the Community Plan, for diverting and disposing of storm water runoff and excess irrigation water at a location, or locations, where the retention or disposition of such water will not contribute to raising the groundwater level in the vicinity of the Cutler-Orosi wastewater treatment facilities.
9. Before the issuance of any land use permit, the Tulare County Economic and Planning Department will require all project applications for new development or redevelopment to include storm water disposal plans in accordance with the recommendations of the Tulare County Public Works Department and Caltrans to prevent runoff flows into the State highway rights-of-way.

Housing

GOAL V: Provide safer and adequate housing for all citizens within the

community.

Objective I: Reduce deficiencies in existing housing stock.

Policies:

1. Through the Housing Element process, Tulare County shall strive to minimize or eliminate blight in Cutler-Orosi.
2. Apply the health, safety and welfare standards of the Tulare County Ordinance Code, which may require demolition of vacant substandard housing units.
3. Encourage relocation of families from substandard housing units by expanding affordable housing opportunities within the community.
4. Inform potential rehabilitators of substandard housing that incentives such as reduced building permit fees are available.
5. The County will strive to ensure that there is an adequate amount of planned residential land to meet the housing needs of Cutler-Orosi.
6. The County will ensure that there are adequate sites and will work with the Cutler PUD and Orosi PUD and other agencies to ensure that there are adequate public facilities to support future housing needs in Cutler-Orosi.
7. The County will work diligently towards the rehabilitation of the housing stock in Cutler-Orosi.
8. The County will attempt to maintain a balance between owner and renter-occupied housing stock in Cutler-Orosi.
9. Sites for multi-family development shall be identified which do not overburden any one area of the community or neighborhood. Large developments should be located on collector or arterial streets.

Objective II: Encourage new housing construction within the community to meet the needs of low and moderate income residents.

Policies:

1. Enable the housing industry to proceed with construction in a timely and cost-efficient fashion by providing adequate amounts of residential zoning.
2. Assure that the housing industry is made aware of residential development potentials in Cutler-Orosi.
3. Coordinate residential zoning with availability of utilities and community services.
4. Provide adequate amounts of residential zoning to encourage the housing industry to proceed with construction of residential development in a timely and cost-efficient fashion.

Objective III: Provide a role for mobile homes in satisfying community-housing needs.

Policies:

1. Allow for development of mobilehome parks in appropriate locations.
2. Permit mobilehomes to be installed on residentially designated lots within the original townsite; however, mobilehomes shall not be allowed to occupy more than 25% of such lots.
3. Discourage mobilehomes on individual lots outside the original townsite, except when necessary for caretaker use in conjunction with commercial and industrial activities.
4. Require skirting or some other type of architectural screening to improve mobilehome appearance and safety.

Economic Base

GOAL VI: Develop a strong and diversified economy.

Objective I: Provide sufficient land for industrial and commercial development to meet the needs of the community and region and

strengthen and maintain a viable community economy.

Policies:
1. Promote a concentration of industrial and commercial activities within selected areas to allow for cost efficient provision of necessary services and to protect residential neighborhoods.
2. Zone an area for a community shopping center in the northeastern portion of the community to meet local consumer needs.
3. New service commercial uses should be located away from existing or planned residential areas or mitigation measures should be incorporated into the design of the project that will eliminate any undesirable conditions.
4. The County shall encourage industrialization in Cutler-Orosi, especially industries that provide year-round employment, and which require close or near highway access.
5. Reserve areas with convenient highway access for highway-oriented commercial development, thereby encouraging outside cash flow into the community.

Objective II: Provide the services necessary to support new industrial and commercial development.

Policies:
1. Encourage the Cutler PUD and Orosi PUD to give priority to community service development in the areas reserved for commercial and industrial growth on the plan.
2. Place emphasis on development and upgrading of water supply facilities to meet fire protection standards in planned commercial and industrial areas.

Objective III: Provide the necessary safe guards to attract quality industrial and commercial development to the community.

Policies:
1. Assure that commercial and industrial developments are designed so that traffic will not impact upon residential areas.
2. Develop standards for signs, landscaping, and fencing to improve the attractiveness of industrial and commercial areas.

Environmental Quality and Public Safety

GOAL VII:
Preserve and enhance the quality of life for present and future generation of Cutler-Orosi citizens.

Objective I: Upgrade the level of community health, sanitation and safety.

Policies:
1. Encourage capital improvements (curbs, gutters, streets paving, lighting, etc.) within existing developed areas, which will upgrade the community image and improve safety.
2. The County shall, within its authority, protect the public from danger to life and property caused by fire.
3. The County shall, within its authority, protect the public against crime against people and property.

Objective II: Provide sufficient open space for community recreation needs.

Policies:
1. Encourage reservation of open space for recreational purposes in conjunction with future residential developments.
2. Facilitate innovation in housing and subdivision design so that private recreation and open space areas can be accommodated.

Objective III: Protect Agricultural Lands:

1. Land within the respective Urban Development Boundary of Cutler-Orosi, which is designated as residential reserve, commercial reserve, or industrial reserve shall be retained in agricultural use until such time as conversion to urban use (as defined in the Tulare County General Plan) is appropriate. When a rezoning occurs without a general plan amendment, the reserve designation shall be removed from the parcel.
2. The following criteria shall be used to determine when conversion to urban use is appropriate:
   a. The property is not subject to an agricultural preserve contract;
   b. Full urban services, schools, and infrastructure sufficient to serve urban development either are available or can be made available; and
   c. At least 30% the property boundaries are contiguous on at least one side to existing urban development.
3. Until productive agricultural lands are ready to be developed they shall be retained in parcels of sufficient size to allow agricultural uses.
4. Agricultural uses outside the UDB shall be protected from conflicting urban uses by aligning the UDB along streets, canals or other man-made or natural features in order to buffer the two uses to the extent possible.
5. The County (and developers) shall carefully coordinate the extension of public water and sewer services in the planning area with Cutler Public Utility District (PUD) and Orosi PUD, to promote logical and orderly development patterns.
6. New agricultural preserves and contracts shall not be approved for properties within Cutler PUD and Orosi PUD.
7. Commercial and residential uses will be required to connect to public services provided by the Cutler PUD and Orosi PUD.
8. Large lot agricultural zoning such as AE-20 shall be applied as a holding zone to properties, which do not meet the criteria set forth in policy Agriculture Policy 2 above.
9. Promote growth along SR 63 for industrial and commercial uses to preserve adjacent agricultural lands consistent with the Corridor Framework Policies in the Tulare County General Plan.

Objective IV: Prohibit to the extent allowed by law activities that will have a significant adverse effect on the environmental quality of Cutler-Orosi.

Policies:

1. Prohibit to the extent allowed by law residential development in excess of seven families per acre, until a sewage collection system is constructed.
2. Require a sufficient lot area for all new residential development to ensure an adequate area for on-site sewage disposal until a sewage collection system is constructed.
3. Prohibit to the extent allowed by law new intensive animal raising operations within the "windshed" area of Cutler-Orosi.
4. Carefully evaluate proposed heavy industrial uses to be located east of SR 63 to assure that such uses will not have an adverse impact on the community.

General Plan Framework

Value Statements

1. The beauty of the County and the health and safety of its residents will be protected and enhanced.
2. The County will create and facilitate opportunities to improve the lives of all County residents.
3. The County will protect its agricultural economy while diversifying employment opportunities.
4. Every community will have the opportunity to prosper from economic growth.
5. Growth will pay its own way providing sustainable, high quality infrastructure and services.

Framework Concepts

- *Concept 1: Agriculture*
  One of the most identified assets in Tulare County is the rich agricultural land on the valley floor and in the foothills. The General Plan identifies agriculture not only as an economic asset to the County but also as a cultural, scenic, and environmental element to be protected and to insure that the utilization of these resources may continue to economically succeed.
- *Concept 2: Land Use*
  Tulare County has a number of unincorporated communities that will grow and develop and natural resource lands (agriculture, mineral extraction, and open space) that will be preserved and permitted to expand. It is anticipated that much of the projected population growth will require a range of housing choices, neighborhood support services, and employment producing uses that are centrally located in cities and unincorporated communities. The County will also utilize its goals and policies to guide the conversion of agricultural and natural resource lands to urban uses.
- *Concept 3: Scenic Landscapes*
  The scenic landscapes in Tulare County will continue to be one of its most visible assets. The Tulare County General Plan emphasizes the enhancement and preservation of these resources as critical to the future of the County. The County will continue to assess the recreational, tourism, quality of life, and economic benefits that scenic landscapes provide and implement programs that preserve and use this resource to the fullest extent.
- *Concept 4: Natural and Cultural Resources*
  As Tulare County develops its unincorporated communities, the County will ensure that development occurs in a manner that limits impacts to natural and cultural resources through the implementation of its Goals and Policies and through proper site planning and design techniques.

Guiding Principles

- *Principle 1: Opportunities*
  Provide opportunities for small unincorporated communities to grow or improve quality of life and their economic viability.
- *Principle 2: Reinvestment*
  Promote reinvestment in existing unincorporated communities in a way that enhances the quality of life and their economic viability in these locations.
- *Principle 3: Protection of Resources*
  Protect the County's important agricultural resources and scenic natural lands from urban encroachment through the implementation of Goals and Policies of the General Plan.
- *Principle 4: Limit Rural Residential Development*
  Strictly limit rural residential development potential in important agricultural areas outside of unincorporated communities, hamlets, and city UDBs, UDBs (i.e., avoid rural residential sprawl).
- *Principle 5: Agricultural Facilities*
  Allow existing and outdated agricultural facilities in rural areas to be retrofitted and used for new agricultural related businesses (including non-agricultural uses) if they provide employment.
- *Principle 6: Planning Coordination and Cooperation*
  Enhance planning coordination and cooperation with the agencies and organizations with land management responsibilities in and adjacent to Tulare County.

Preliminary Assessment of Land Needs

Market Analysis

Renter Affordability

According to the US Census Bureau, the 2013-2017 American Community Survey **(see Table 34)** data indicated that in 2017 the cost of rent in Cutler-Orosi was lower than in Tulare County and the State of California, but that rent constituted a larger percentage of household income. The median rent was $755 in Cutler and $873 in Orosi, whereas the median rent was $877 in Tulare County and $1,358 in the State of California, respectively. In Cutler, the percentage of households paying 35% or more of income on housing was 63.9% and in Orosi, it was 68.2%, while the percentage of households paying 35% or more of income on housing was 47.2% in Tulare County and 47.0% in the State of California.

Table 34 - 2013-2017 American Survey: Renter Cost							
Geography	Median Rent	Gross Rent as a % of Household Income					
		Less than 15.0 %	15.0% to 19.9%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	$1,358	9.6%	10.9%	12.1%	11.5%	9.6%	46.4%
Tulare County	$877	10.6%	10.5%	12.1%	10.7%	8.7%	47.2%
Cutler CDP	$755	12.0%	13.1%	5.7%	1.1%	4.0%	63.9%
Orosi CDP	$873	11.5%	14.1%	6.2%	0.0%	0.0%	68.2%
Source: 2013-2017 American Community Survey 5-Year Estimates							

Owner Affordability

According to the US Census Bureau, the 2013-2017 American Community Survey data indicated that in 2017 the cost of a mortgage in Cutler-Orosi was lower in Tulare County and the State of California. The mortgage constituted a smaller percentage of household income compared to Tulare County and the State of California. The median owner cost (with mortgage) was $927.00 in Cutler and $1,132.00 in Orosi, whereas the median owner cost was $1,345 in Tulare County and $2,206 in the State of California, respectively. In Cutler, the percentage of households paying 35% or more of income on housing was 29.9% and in Orosi 53.0%. The percentage of households paying 35% or more of income on housing was 31.7% in Tulare County and 30.7% in the State of California **(see Table 35).**

Table 35 - 2013-2017 American Community Survey: Owner Cost						
Geography	Median Owner Cost (with mortgage)	Mortgage as a % of Household Income				
		Less than 20.0%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	$2,206	32.5%	19.6%	12.5%	9.0%	30.7%
Tulare County	$1,345	36.2%	14.5%	10.4%	7.1%	31.7%
Cutler CDP	$927	62.9%	0.0%	7.0%	14.8%	29.9%
Orosi CDP	$1,132	52.4%	14.5%	0.0%	0.0%	53.0%
Source: 2013-2017 American Community Survey 5-Year Estimates						

Existing Businesses

According to the US Business Directory, there were 90 existing businesses in the Cutler area in 2018, http://us-business.info/directory/cutler-ca/ **(see Table 36)** and 186 existing businesses in the Orosi area http://us-business.info/directory/orosi-ca/ **(see Table 37).**

Table 36: Existing Businesses in Cutler

99 Cents Plus Store	Cutler Orosi Waste Water	Ledbetter Park	St. Mary's Religious Education CCD
Abby's Video & Deli	E R Holden & Sons	Lovell Continuation School	T Rod INC
Aden Market	El Progreso	M I Salon	Tulare County Child Care
Arnold Trucking	El Ranchero Perez	Magnolia Market	Tulare County Fire Department
Avila's Tires	Family Healthcare Network	Martinez Accounting	Tulare County Sheriff's Office
Awasthi, Sarvamitra, MD	First Southern Baptist Church	Mini Fashions Outlet	Twin Girls Farms
Baba, Steven, DDS	Fresco Market Place	Monterey Water Company	US Post Office
Barsamian Farms	George Brothers Ranch Shop	Mulholland Citrus	Valero
Big Discount Store	Golden Sierra Cold Storage	Mundi Diesal	Warren & Baerg Manufacturing INC
Birreria	Golden Star Citrus	Nacho Auto Repair	Wawona Garage & Machine Shop
Birrieria Apatzingan	Golden State Vintners	O&R Trucking	Wawona Packing
C & E Ananian	Green Luck Landscape & Maintenance	Pacific Trellis Fruit	Western Farm Service INC
Carniceria Moyahua	Guerrero Martinez Tax Service	Paramount Citrus Association	Wileman Brothers & Elliott INC
Christian Worship Center	HB Gills INC	Pena's Auto Sales	
Comp Tek	J & L Tree Service	Pena's Recycling Center	
Crop Production Service	J V Farm Labor Service	Phil's Lock & Key	
Cutler Liquor	Jaime Lisa A (MA)	Panaderia Esesarte	
Cutler Child Care Center	Junior's #2 Fashion	Rene G Ortega Concrete	
Cutler Market		Rosewood Villas	
Cutler Bakery	Karon's	Rubalcaba Grocery	
Cutler Orosi Senior Center	Kathy Ruvalcaba	Ruvalcaba Meat Market	
Cutler School	Kathy's Style Shoppe	Saint Mary's Parish Hall	
Cutler Supermarket	Kaweah Container INC	Shell	
Cutler Orosi Unified School District	LA Esperanza	St. Mary's Catholic Church	
Cutler PUD	LA Fiesta Food		

Table 37: Existing Businesses in Orosi

1st Baptist Church	Cevallo's Bakery	Gil's Auto Wrecking	McDonalds
99 Cents & More	Citricove Orchards	Golden Valley School	McPhaill Citrus Ranch
A & Engraving	Cutler Orosi Unified SCHL District	Golden Villa Mini-Mart	Mickie's Hair Salon

A S Oriental Seafood Market	CSET	Glenn's Orosi Mini Storage	Monterey Water Company
Abe-EL Produce	Cutler Orosi Special Education	Golden West Labor	Midway Auto Parts
Abel Sahagun Insurance	Cutler Rexall Pharmacy	GSF Nut Company	Mountain View AG Services INC
Academy West Insurance Services INC	Cuts N Styles	Gonzalez Serge	N & R Transportation
Agrape Christian Superstore	Davila Memorials & Granite Works	Good Choice Insurance Service	Nakatsuchi Hirofumi DDS
Allied Insurance	Diana's Daycare	Green Valley Medical Clinic	Navarro, Isaac R
Aleman 99 Cents Y Mas	Dollar Store & More	Gonzalez, Anna M. MD	Nava Smog
Aguilar, Valerie (MA)	Doneright Electricians	Green Medical Caregiver	Novedandes Nana
Alejandra Flowers	East Orosi Community Service District	Guevara's PM Roofing Co.	Orlopp Turkey Breeding Farms
Aldaz Pedro	East Orosi Market	H & R Block	Orosi Auto Repair & Tire Service
Alta Vista Apartments	Ecology Sound Farms	Happy Apple Co	Orosi Barber Shop
Amigos Transmission & Auto Repair	El Cesar	Hong Kong Chop Suey	Orosi Branch Library
Aleman Clothing	El Lago	Iglesia Ni Christo-Church	Orosi Center
Angie's Beauty Salon Alta Vista Apartments	El Mexicano-Soccer Accessories	Ikard & Ikard	Orosi Food Mart
Arturo's Portable Toilet Service	El Monte School Office	JL Recycle Center	Orosi Family Medical Care
Augies Farm Labor Service	El Pio Pio Restaurant	K & K Market	Orosi Flowers N More
Auto Title Experts	El Progreso Tortilleria	Kaleka, Virender S. MD	Orosi Donuts
Bank of the West	El Rincon Market	Kaspian's Liquor	Orosi ER Dental Center
Bay Area P O S	Faith Bible Church of God	Kay Bee Farm	Orosi MH Estates
Bayardo, Carlos, MD	Family Dollar	Kwick Korner	Orosi Mart & Deli
Beneje's Drive In	Family Health Care Network	La Bonita Supermercado	Orosi Medical Supply
Big O Gas & Deli	Fancher Creek Packing	La Mexicana	Orosi High School
BHK Nut Corp	Farm Labor Contractor	Lara's Meat Market	Orosi Urgent Care CTR Medical
Butler Ranches	First Baptist Church	Lawson Packing	Orosi Swap Meet
Boss Concrete	Freedom Transport	Leon Service Station	Orosi Public Utility District
Calvary Temple	Gabriel's Auto Mechanic	Little Caesars Pizza	Orosi Mini Mart
Camilo Galacgac	Galindo Electric	Lopez, Aileen J, MD	Orosi Pizza House
Cely's Beauty	Garcia Window Screens	M & G Farms	Orosi Wireless
Centro Cristiano Vida Abundante	Giannandrea Rita	Madrid George	P Marquez Enterprises
Palm Elementary School	Papich Construction Co.	Paramount Citrus	Pop's Propane SVC
R-N Market	RBM Industries	Rising C Ranches	Rose City

			Transportation
S & J Ranch INC	Saint Germain	Sal's Tobacco & More	Salon Expressions
Sanchez, Alma R. DDS	Sequoia Presbyterian Church	Sand Creek Apartments	Secera Vending
Sequoia View Apartments	Seventh-Day Adventist Church	Smart Money	Singh, Gurteg, DDS
Sierra Pacific Materials	St Germain Botanicals	Suarez, Boris M	Super 7
Subway	Taqueria Santa Fe	Templo De Jesus	Templo La Paz Mennonite Brethren
The Car Wash	The Saul-on	Tulare County Child Care	Trevino Construction
Trevino & Son Farm Labor	Town & Country Christian School	Tulare 2010 Community LP	U-Haul
United Pentecostal Church	US Post Office	VM Logistics	Valero Cristina MD
Valley Smog	Velozz Communication	Video Castle	Villa De Guadalupe Apts
Vidrio, Maria	W & E Electric Service	Wawona Garage & Machine Shop	YR Pizza Planet
Z's Communication			

Market Feasibility

The community of Cutler **(see Table 37)** already has seven (7) grocery stores including Aden Market, Cutler Market, Cutler Supermarket, Fresco Market Place, La Fiesta Food, Magnolia Market, and Rubalcaba Grocery and two (2) convenience stores: Cutler Liquor and Shell Mini Mart. Cutler also has five (5) restaurants including: Abby's Video & Deli, Birrieria Apatzingan, El Progreso, El Ranchero Perez, La Esperanza. There is also Avila's Tires, Pena's Auto Sales, Western Farm Service, 99 Cent Plus Store, and Big Discount Store located in Cutler. Without a substantial increase in households, the discretionary income of Cutler residents would not support a new large commercial area.

The community of Orosi **(see Table 37)** already has 10 grocery stores including A S Oriental Seafood Market, East Orosi Market, El Progreso Tortilleria, El Rincon Market, K & K Market, Orosi Food Mart, R-N Market, Saint Germain, and Super 7, six (6) convenience stores: Kaspian's Liquor, Kwick Korner, Golden Villa Mini-Mart, Orosi Mini Mart, Orosi Mart & Deli, Orosi Food Mart, and has 12 restaurants including: Benje's Drive In, El Cesar, El Lago, El Pio Pio Restaurant, Hong Kong Chop Suey, La Mexicana, Little Caesars Pizza, McDonalds, Orosi Pizza House, Subway, Taqueria Santa Fe, and YR Pizza Planet. There is also Alejandra Flowers, Aleman Clothing, Family Dollar, Orosi Auto Repair & Tire Service, and Bank of the West, located in Orosi. Without a substantial increase in households, the discretionary income of Orosi residents would not support a new large commercial area.

Assessment of Land Needs

Population Growth Forecast

The projected Year 2030 combined population of Cutler-Orosi is 16,099 and the projected increase in combined population from 2017 to 2030 is 2,489persons. **(see Table 38, 39, and 40)**.

Population Growth Forecast

Table 38 - Cutler-Orosi Population Projections

Growth Rate	2017	2020	2030
Cutler	**5,850**	**6,081**	**6,920**
Orosi	**7,760**	**8,067**	**9,179**

Demand Forecast

With the existing 2,441.9 acre Cutler-Orosi Urban Development Boundary, approximately 1,246 acres are urbanized. By dividing the estimated 2030 population of 16,099 by 1,246 urbanized acres, a ratio of 12.92 persons per urbanized acres is calculated. The forecasted increase in population from 2017 to 2030 is 2,489 persons. Projecting this ratio into the future (2,489 persons divided by 12.92) suggests that an additional 198 acres will be needed by the Year 2030.

Based on the data and analysis contained above and forecasted population and housing estimates below, the following table includes the Year 2030 square footage and residential unit demand forecast for the Cutler-Orosi planning area.

Population and Housing Units

Table 39 Population Projection (Cutler)

Year	Population	Growth (%)
2017	5,850	0.013
2018	5,926	0.013
2019	6,003	0.013
2020	6,081	0.013
2021	6,160	0.013
2022	6,240	0.013
2023	6,321	0.013
2024	6,404	0.013
2025	6,487	0.013
2026	6,571	0.013
2027	6,657	0.013
2028	6,743	0.013
2029	6,831	0.013
2030	6,920	0.013

Table 40 Population Projection (Orosi)

Year	Population	Growth (%)
2017	7,760	0.013
2018	7,861	0.013
2019	7,963	0.013
2020	8,067	0.013
2021	8,171	0.013
2022	8,278	0.013
2023	8,385	0.013
2024	8,494	0.013
2025	8,605	0.013
2026	8,717	0.013
2027	8,830	0.013
2028	8,945	0.013
2029	9,061	0.013
2030	9,179	0.013

Population and Housing Units

The Year 2017 baseline population was determined by projecting the 2017 American Community Survey data population by an annual growth rate of 1.3% annually. The Survey indicated that in Year 2017 the community of Cutler had 1,293 dwelling units (including vacant dwellings) with a population of 5,850. At an annual growth rate of 1.3%, the projected housing units are 1,344 and 1,529 in Years 2020 and 2030, respectively, and projected population is 6,081 and 6,920 in Years 2020 and 2030, respectively. In the community of Orosi had 2,076 dwelling units (including vacant dwellings) with a population of 7,760. At an annual growth rate of 1.3%, the projected housing

units are 2,158 and 2,456 in Years 2020 and 2030, respectively, and projected population is 8,067 and 9,179 in Years 2020 and 2030, respectively.

Table 41 Housing Projection (Cutler)

Year	Housing	Growth (%)
2017	1,293	0.013
2018	1,310	0.013
2019	1,327	0.013
2020	1,344	0.013
2021	1,362	0.013
2022	1,379	0.013
2023	1,397	0.013
2024	1,415	0.013
2025	1,434	0.013
2026	1,452	0.013
2027	1,471	0.013
2028	1,490	0.013
2029	1,510	0.013
2030	1,529	0.013

Table 42 Housing Projection (Orosi)

Year	Housing	Growth (%)
2017	2,076	0.013
2018	2,103	0.013
2019	2,130	0.013
2020	2,158	0.013
2021	2,186	0.013
2022	2,214	0.013
2023	2,243	0.013
2024	2,272	0.013
2025	2,302	0.013
2026	2,332	0.013
2027	2,362	0.013
2028	2,393	0.013
2029	2,424	0.013
2030	2,456	0.013

Opportunities & Constraints

Opportunities

Complete Streets

The Complete Streets Act of 2007 (Assembly Bill 1358) requires counties when updating General Plans, to identify how the jurisdiction will provide for the routine accommodation of all users of the roadway including motorists, pedestrians, bicyclists, individuals with disabilities, seniors, and users of public transportation.

Affordable Housing

The community of Cutler has a median income of $31,939 and Orosi medium income is $35,798, which is less than 80% of the State median income of $67,169. Approximately 55% of the households in Cutler and 47.0% of the households in Orosi spend 52.69% or more of their income on housing. As such, there is a high need for affordable housing.

Moreover, 63.9% of Cutler's renters and 68.2% of Orosi's renters spent over 35% or more of their income on rent. Average household size of renters was 5.34 for Cutler and 3.82 for Orosi's. In addition, 29.9% of Cutler's owner-occupied units and was 53.0% for Orosi spent over 35% or more of their income on mortgages. Average household size of owner-occupied units was 3.68 for Cutler and was 3.91 for Orosi.

It is very likely that many children in Cutler-Orosi share bedrooms. As there are no bus lines in Cutler-Orosi, reduced parking is not a realistic strategy to reduce development costs. Affordable housing will require more land in Cutler-Orosi than would typically be required in an area where public transit is available. In terms of siting, medium to high-density housing should be located along collector streets and/or arterials.

Urban Development Boundary

Although State planning law does not define specific requirements for establishing planning area boundaries, it is generally agreed that the planning boundaries should include the territory within a community's probable ultimate physical boundaries and service area. Urban Development Boundaries provide a planning framework that promotes the viability of communities, hamlets, and cities while protecting the agricultural, open space, scenic, cultural, historic, and natural resource heritage of the County. In the past, the County used three key planning tools to guide urban development in all unincorporated areas of the County. The first was the Urban Boundaries Element; the second are the Area Plans; the third are the General Plans for identified incorporated cities and Community Plans for unincorporated communities. In 1974, Tulare County added an Urban Boundaries Element to its General Plan. The element required the designation of an urban boundary for every "viable" unincorporated community in the county. The Urban Boundaries Element also established Urban Improvement Areas (20-year planning boundaries) for certain communities. The 1974 Urban Boundaries Element designated both an Urban Area Boundary and an Urban Improvement Area for Cutler-Orosi.

In 1983, the Urban Boundaries Element was amended to create Urban Development Boundaries (UDBs, which are also to function as 20-year planning boundaries) and to Change the function of the Urban Area Boundary to simply a "comment line" around incorporated cities. Under the 1983 amendment, Urban Area Boundaries are no longer established around unincorporated communities - and Urban Improvement Areas are to be phased out over time (replaced with UDBs) as each community's boundaries are updated.

For unincorporated communities as per the Planning Framework Element of the General Plan, the UDB is a County adopted line dividing land to be developed from land to be protected for agricultural, natural, open space, or rural uses. It serves as the official planning area for communities over a 20-year period. Land within an unincorporated UDB is assumed appropriate for development and is not subject to the Rural Valley Lands Plan or Foothill Growth Management Plan.

Constraints

There are several constraints or restrictions which will impact the nature and location of future development within the community. In particular, these constraints pertain to existing problems of public health and safety; acceptable noise levels impacts of deteriorating housing, lack of a full range of community services. Following are constraints that were recognized in the preparation of this plan.

Noise Contours

There are a variety of sources that produce noise in the Cutler-Orosi Plan Area and include traffic, railroad operations, airport operations, and agricultural operations. Traffic noise is the most dominant source of ambient noise in the County, according to the Tulare County General Plan EIR **(see Table 43)**. SR 63 and Avenue 416 run through the Cutler-Orosi Plan Area and would be the largest source of traffic noise in the area due to the high volumes of traffic. Noise from SR 63 adversely impacts an area through central Cutler-Orosi making properties in close proximity to the highway less desirable for new housing construction.

Table 43 - Noise Levels

Location	ADT	From Roadway Centerline			
		Distance (feet) to 70 Ldn Contour	Distance (feet) to 65 Ldn Contour	Distance (feet) to 60 Ldn Contour	Distance (feet) to 55 Ldn Contour
SR 63 Ave 400 to Emerald Dr.	8,300	34	74	159	343
SR 63 Emerald Dr. to Ave 416	13,000	43	92	198	426
SR 63 Ave 416 to Ave 422	7,200	29	62	133	287
Ave 416 Road 120 to SR 63	8,000	37	79	171	368
Ave 416 SR 63 to Boyd Dr	850	8	18	38	83

Source: 2010 General Plan Background Report

Sand Creek

Sand Creek, an ephemeral stream, which carries local storm water runoff southerly to Cottonwood Creek. Cottonwood Creek flows into Cross Creek, and flows to the Tule River. Sand Creek lies between the communities of Cutler-Orosi. Periodic flooding of Sand Creek has previously precluded the quarter to half-mile separating the communities from developing to urban uses prior to existing flood control improvements. Sand Creek usually is dry during the summer.

Sand Creek is located within the FEMA Special Flood Hazard Areas and that the inundation zone must be included on hazard disclosures pertaining to real estate contracts.

Sand Creek lies within the Sand Creek Dam inundation zone due to dam failure. Sand Creek is located in Tulare County, California and displayed on the Monson USGS quad topo map. Sand Creek Dam is used for drinking water, fish and wildlife protection and flood control, among other things. Construction of the dam was completed in 1980. At normal levels it has a surface area of 55 acres. The dam is owned by Tulare County Resource Management Agency. Sand Creek is rock fill and its height is 60 feet with a length of 933 feet. Normal storage is 1,050 acre, and it drains an area of 26.3 square miles.

Tulare County Economic Development Strategy

Tulare County's current Economic Development Strategy focuses on tourism, the agricultural industry and pursuing grants.

Agriculture

Tulare County has a booth at the World Agricultural Exposition (Ag Expo) every year. The Economic Development Office uses the event to promote Tulare County tourism and business opportunities. Partnering with the County's Purchasing Department the Ag Expo provides an excellent method to market directly to the global agriculture related businesses attending the Ag Expo and sell surplus county equipment.

Grants

- State Water Resources Control Board – State Revolving Fund: $500,000 for Traver Community Wastewater System Improvements Planning Study and Design, once plans are near complete we will apply for construction funding between $8 and 10 million.
- State Water Resources Control Board: have applied and received $5 million in construction funding for Phase 1 of the Yettem Seville Water System.
- County Measure R funding $575k for sidewalks and ADA improvements in Goshen.
- ATP Active Transportation Program- Statewide competitive $2 million funding is anticipated for Safe Routes to School and ADA improvements in and around three (3) Goshen.
- Low Carbon Transit Program funding $147,474.00.
- Prop 84 – Goshen Neighborhood Improvement Program funding $2,153,900.00.
- Yettem & Seville Project Phase 1 funding $4,300,200.00
- Navigation Aids at Sequoia Field Airport funding $340,200.00
- Transit Operations & Maintenance Facility (TOMF) funding $10,800,000.00

Solar Projects

In Tulare County, there have been 13 Utility Scale Solar Projects that have a capacity of 198 MW. There are nine (9) projects in /under Construction with a capacity of 260 MW. In terms of total solar projects (including Utility Scale, Solar on Dairies, Commercial Solar, and Residential Solar) there have been 1570 projects built that accounts for a capacity of 227.5 MW. The Corridor offers realistic potential to locate solar projects closer to the urban areas and outside of the direct line-of-sight viewshed of the Highway 99 Corridor. **Figure 24** provides a summary of solar development in Tulare County.

Figure 25 - Solar Development in Tulare County

Utility Scale Solar Projects		
Phase of Construction	**No. of Permits**	**Total Capacity (MW)**
Under Review	2	740
Pre-construction/Under Construction	2	90
Constructed	24	388
Total	**28**	**1218**
Solar Projects on Dairies		
Phase of Construction	**No. of Permits**	**Total Capacity (MW)**
Under Review	2	2.16
Pre-construction/Under Construction	9	8.30
Constructed	61	47.63
Total	**72**	**58.09**
Other Commercial Solar Projects		
Phase of Construction	**No. of Permits**	**Total Capacity (MW)**
Under Review	1	0.06
Pre-construction/Under Construction	16	6.46
Constructed	265	73.56
Total	**282**	**80.08**
Anaerobic Digesters		
Phase of Construction	**No. of Permits**	**Total Capacity (MW)**
Under Review	2	
Pre-construction/Under Construction	52	
Constructed	12	
Total	**66**	
Residential Solar Projects (based on 7 kw/sfd average)		
Phase of Construction	**No. of Permits**	**Total Capacity (MW)**
Under Review	16	0.26
Pre-construction/Under Construction	147	2.24
Constructed	3174	24.14
Total	**3337**	**26.64**

Solar Project Totals		
Phase of Construction	**No. of Permits**	**Total Capacity (MW)**
Under Review	23	742.48
Pre-construction/Under Construction	226	124.00
Constructed	3536	533.33
Total	**3785**	**1399.81**

SWOT Analysis

Strengths

- Tulare County has a strong agricultural economy.
- There is an elementary school
- There is a High School in Cutler-Orosi
- There a number of highway commercial businesses.
- Cutler-Orosi is located on SR 63 and Avenue 416.
- There is a variety of commercial and industrial uses.
- The cost of living is low in Tulare County.
- Water supply has reserve of 70,000 gpd.
- The sewer system is operating at approximately 65% of its capacity.
- Recreational sports complex and a community park

Weaknesses

- Cutler ($31,939) and Orosi ($35,798) are considered severely disadvantaged communities.
- Sidewalks are needed.
- The Storm drain system is inadequate improvements are required.

Opportunities

- Vacant land is available.
- Complete Streets
- Cutler-Orosi is located next to State Route 63 where the average annual daily traffic (AADT) along SR 63 in the study area was approximately 12,100 south of Avenue 416 and 7,300 south of Avenue 400 in 2017[46])
- A Mixed Use Overlay Zone would allow for additional development.
- There is growth in distribution jobs in California.
- Tulare County Area Transit Agency (TCaT) has bus routes that link Cutler-Orosi with Visalia and Dinuba.

Threats

- There has been a gradual decline in the number businesses and jobs.
- Cutler-Orosi competes with Visalia, Tulare, Dinuba, and other parts of the County. Cutler-Orosi also competes with the City of Kingsburg and Selma in Fresno County.
- Tulare County has a limited budget for road improvements. Budgeting for roadway maintenance could be reduced depending upon the financial health of Public Works branch.
- Small businesses are sensitive to changes in tax rates, minimum wage, requirement of health care provisions and other nationally established policies and requirements.
- Farms are getting larger and relying more on automation. This can reduce jobs and incomes.
- National and Statewide economic trends can impact Cutler-Orosi's economy.

[46] Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS). Page 11. Prepared by VRPA Technologies, Inc. and included in Appendix "E" of the Update's Draft EIR.

Reducing Barriers to Economic Development

California Competes

"The California Competes Tax Credit is an income tax credit available to businesses that want to locate in California or stay and grow in California. Tax credit agreements will be negotiated by GO-Biz and approved by a newly created "California Competes Tax Credit Committee," consisting of the State Treasurer, the Director of the Department of Finance, the Director of GO-Biz, one appointee from the Senate, and one appointee from the Assembly."[47]

"The California Competes Tax Credit only applies to state income tax owed to the Franchise Tax Board. The credit is non-refundable, and in the case where the credit allowed exceeds tax owed, the excess may be carried over to reduce the tax in the following year, and the succeeding five years if necessary, until exhausted."[48]

"The value of the credit will be based on the following factors:

- The number of jobs the business will create or retain in this state.
- The compensation paid or proposed to be paid by the business to its employees, including wages and fringe benefits.
- The amount of investment in this state by the business.
- The extent of unemployment or poverty where the business is located.
- The incentives available to the business in this state, including incentives from the state, local government, and other entities.
- The incentives available to the business in other states.
- The duration of the business' proposed project and the duration the business commits to remain in this state.
- The overall economic impact in this state of the business.
- The strategic importance of the business to the state, region, or locality.
- The opportunity for future growth and expansion in this state by the business.
- The extent to which the anticipated benefit to the state exceeds the projected benefit to the business from the tax credit."[49]

"The tentative amount of credits that GO-Biz can allocate is as follows:

- $30 million in fiscal year 2013/14.
- $150 million in fiscal year 2014/15.
- $200 million in each fiscal year 2015/16 through 2017-18."[50]

"…25 percent of the total credits available each year is expressly reserved for small businesses (gross receipts of less than $2 million during the previous taxable year)."[51]

[47] California Competes Tax Credit FAQ
[48] Ibid.
[49] Ibid.
[50] Ibid.
[51] Ibid.

Tulare County Strategy

In rural areas, elimination of all barriers to economic development is the foundation for growth. This Plan addresses the following four potential barriers to Economic Development.

Infrastructure

The water system is at capacity and the wastewater system is near limiting capacity. In order for more development to occur, service levels for water and wastewater need to be expanded. Grant funding is needed to increase service levels."

Use Permits

There are a number of uses that currently require Planning Commission approval. In many cases, these uses are beneficial for the community and do not necessarily need discretionary review. In order to reduce the cost of and length of time to obtain entitlements, use permit requirements are being reduced.

Education

Tulare County has five satellite campuses for four-year universities: California State University-Fresno, University of California-Davis, Fresno Pacific University, Brandman University, and the University of Phoenix. Community Colleges in Tulare County include the College of the Sequoias, Porterville College, and San Joaquin Valley College. Workforce Development Partners include Proteus Inc., and CSET.

Table 44 - Estimated Education Attainment of Cutler-Orosi Population

	Percent Less than 9th grade	Percent 9th to 12th grade, no diploma	Percent High School graduate (includes equivalency)	Percent bachelor's degree or higher
California	9.9%	8.0%	20.6%	20.1%
Tulare County	20.5%	11.4%	25.4%	9.4%
Cutler	43.9%	17.1%	24.9%	0.2%
Orosi	34.1%	14.7%	21.8%	6.2%

Source: 2013-2017 American Community Survey, 5-year

Based on the 2013-2017 American Community Survey **(see Table 44)**, the educational barrier in Cutler-Orosi begins in grade school. Of the adults age 25 and older, Cutler 43.9% and Orosi 34.1% had an educational level of less than 9th grade. This limits the types of jobs that these adults are qualified for. Improving educational attainment needs to begin in elementary school. As part of the safe routes to schools, Tulare County will provide pedestrian facilities for children to walk or bike to school. This should make it easier for children to get to school.

Home Occupation Regulations

Encouraging small-scale entrepreneurship is one way to foster economic development. Although some home occupations are allowed by right, these home occupations have regulations which limit the type and scope of allowed businesses. By reducing some of these regulations, we can eliminate a few barriers to small-scale entrepreneurship. The following are proposed changes to the Zoning Ordinance.

Eliminate:
Section 15.A.7.a.6 "No one other than residents of the dwelling shall be employed in the conduct of a home occupation."
Section 15.A.7.b.6 "No one other than residents of the dwelling shall be employed in the conduct of a home occupation."
Section 15.A.7.c.5 "A rural home occupation shall be limited in employment to residents of the property and not more than one (1) additional person."

Replace with:
"Employment in a rural occupation shall be limited to residents of the property and not more than three (3) additional non-resident persons."

Add:
All home occupations located within the Cutler-Orosi UDB will not require a use permit.

Health Care

Health care is important for economic development, as businesses need healthy employees. Cutler Orosi Medical Clinic in Cutler, Adventist Health Medical Office in Orosi, and Family HealthCare Network provides healthcare serves for the Cutler-Orosi area. Other medical offices are located in the communities of Visalia, Kingsburg, and Dinuba.

Marketing Strategy

Place

In terms of real estate, location is a major factor (influence) in development and expansion of businesses. There are locational advantages in Cutler-Orosi, access to SR 63 and Avenue 416. These locational advantages are discussed below.

- *Access to State Route (SR) 63:* There is freeway entry and exit points, which provides convenient access and/or egress to SR 63.
- *General Commercial.* One of the goals of this Community Plan is to strengthen the current businesses located in Cutler-Orosi by taking advantage of existing industrial and commercial uses. With the establishment of industrial clusters, existing businesses can attract other type of similar business. Along SR 63 and Avenue 416 are commercial clusters. This cluster includes grocery stores, meat market, bakery, discount stores, fashion shops, beauty solons, and auto maintenance.
- *Quality of Life:* It is possible to increase the desirability of visiting and living in Cutler-Orosi. With physical improvements, the quality of life can be improved. There are a number of potential projects that can improve the quality of life in Cutler-Orosi. New recreational facilities and aesthetic improvements have most the visible effect on the quality of life as the perception of these improvements project change and image enhancements. Physical improvements could include the following:
  - Orosi- ADA Improvement & Blade Patching,
  - Cutler- ADA Improvement & Blade,
  - George Road and 2nd Drive in Cutler. Pedestrian improvements (sidewalk and drainage

improvements to be specific).

Product

The products to be marketed in Cutler-Orosi are vacant land and available buildings.

- *Vacant Land:* Staff has prepared a vacant parcel inventory, which identifies vacant parcels of various sizes, and various zoning districts **(see Figure 25 and Table 45).**

- *Available Buildings:* There are limited opportunities to use buildings for commercial or industrial uses. When individual spaces become available, it would behoove a property owner to coordinate with a real estate agent to lease out each space.

- *Inventory:* The Tulare County Economic Development Department is reaching out to local real estate brokers to develop a parcels availability database. In addition, the County will be providing links from its Economic Development Webpage to individual broker webpages, which can serve to advertise the availability, location, size, etc., of parcels.

Figure 26 - Vacant Parcels Map

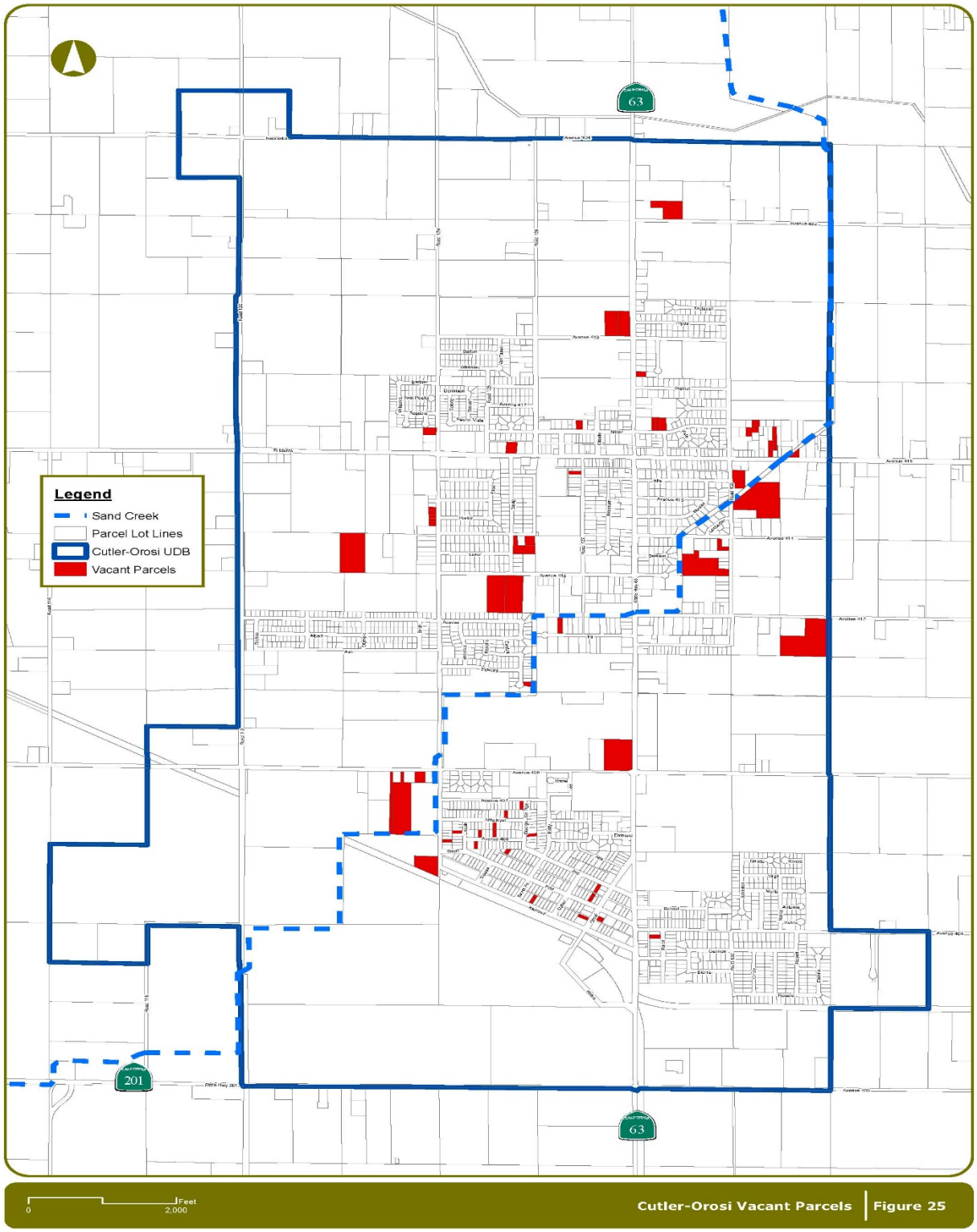


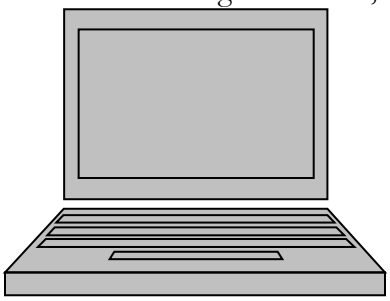
Table 45 - List of Vacant Parcels

APN #	Acres	Zone	APN #	Acres	Zone
21100011	0.52	C-2	23061004	0.27	P-O
23033007	0.64	C-2	23052006	0.31	R-1
21370003	0.15	R-1	23080048	0.16	R-1
21260055	4.64	AE-20	23090022	1.19	R-2
21303017	0.20	R-1	23061006	0.48	P-O, Z
21370004	0.15	R-1	23170033	3.48	R-1
21360014	5.14	AE-20	25150035	7.36	R-A
23010030	1.66	AE-20	25050041	2.30	R-2
21370002	0.16	R-1	32173004	0.03	R-1
21370005	0.15	R-1	32070007	0.16	R-2
21370006	0.15	R-1	32083025	0.15	R-1
21270037	0.44	R-2	32083021	0.15	R-1
23010029	1.60	AE-20	32050025	0.58	C-3
23211017	0.30	R-2	32085014	0.16	R-1
23170032	3.50	R-1	32081016	0.15	R-1
23222012	0.25	R-1	32142017	0.17	C-2
23222013	0.18	R-1	32083030	0.15	R-1
23080065	0.27	R-1	32082007	0.16	R-1
23090026	6.52	R-A	32133012	0.17	R-3
23193003	1.21	R-1	32132006	0.17	R-2
23193001	0.51	R-1	32050035	1.07	C-3
23080072	0.55	R-1	32085018	0.16	R-1
23080003	0.51	R-1	32132010	0.17	R-2
23080030	0.23	R-1	32113009	0.13	R-1
23080004	0.26	R-1	32084002	0.15	R-1
23136009	0.20	R-1	32050037	5.07	C-3
23222007	4.19	R-2	32171004	0.21	R-1
23061005	0.27	P-O	32134020	0.17	R-2
			32260002	1.92	C-3, M-1

Promotion

Promotion of Cutler-Orosi and properties in Cutler-Orosi is a continual need for effective economic development. The following tasks can be used to promote the community of Cutler-Orosi.

- *Companies to Target:* As Cutler-Orosi is a small community along the SR 63 corridor, economic development should be focused on enhancing existing assets. Based on the existing businesses, the County of Tulare should target the following types of businesses:
    1. Agricultural Food Packing
    2. Cold Storage
    3. Food Processing (Dairy-related products such as milk, ice cream, yogurt, butter, etc.)
    4. Distribution Centers



- *Online Presence:* Content is one of the most important aspects of an online presence. The amount of content provides relevancy and usefulness. The following could be done to improve the County of Tulare's online presence:
    1. Constantly improve (and keep current) the Economic Development website
    2. Additional information about Tulare County could be added to this website. Pictures from Tech Fair Photo Contest are available for use by Tulare County Departments.
    3. Write and submit articles for trade magazines and bloggers.
    4. Develop a Tulare County Economic Development Blog.
    5. In addition to social media sites Facebook and Twitter, Tulare County's Economic Development Department could utilize other Social Media sites such as Instagram, Youtube, Flicker, etc.

- *Brochures:* Brochures provide specific and relevant information. Brochures should be designed for the following.
    1. Specific Site Handouts brochures with the following information: APN, address, size, price, contact information, pictures of site, and pictures of the neighborhood, zoning designation, and a location map.
    2. A Food Production Industry Cluster brochure with the following information: a list of available properties, pictures of the area, prices of land, highlights of the Agricultural Industry in Tulare County.
    3. A Solar/Alternative Energy Industry Cluster brochure with the following information: a list of available properties, pictures of the area, prices of land, highlights of the Solar/Alternative Energy Industry in Tulare County.
    4. A brochure that lists the real estate brokers in Tulare County. This brochure should include contact information such as name, address, phone and email.

- *Advertising:* Tulare County's Economic Development Department and the community of Cutler-Orosi can be advertised in targeted trade journals. These trade journals could include:
    1. California Leagues of Food Processors
    2. Food Manufacturing Magazine
    3. Food Processing Magazine
    4. Food Business News Magazine

5. Logistics Business Magazine
6. Food and Beverage Packing Magazine
7. Packing World
8. Packing Digest

- *Events:* Conferences and other events are excellent venues for networking. Cutler-Orosi could be promoted at the following conferences.
  1. World Ag Expo
  2. Food Shows

- *Videos:* Promotional videos could be available online and displayed on conferences.
  1. Powerpoint presentation video of pictures and statistics.
  2. Videos of movies filmed in Tulare County.

Development Suitability Analysis

The purpose of a development suitability analysis is to determine the areas of the community and surrounding vicinity, which could most appropriately accommodate new growth. It is a means of identifying areas free of development constraints and areas in which improvements must be made before urban only to determine the location of the Cutler-Orosi Urban Development Boundary, but development can be allowed. This development suitability analysis will be used not also to help establish land use patterns for the community's future growth.

To determine development suitability, factors that either encourage or constrain development were selected and mapped. Each factor was assigned a suitability rating to show the level of influence it will have on potential new development Suitability ratings used in this study include:

Very High: *These areas are "infill lands", or are surrounded on three sides by existing urbanized land and are, or can be easily be, serviced with urban services.*

High: *These areas are lands free of development constraints and which are either adjacent to existing development and are, or can be, served with community sewer and water service. Wastewater service areas but which are near existing urban development.*

Moderate: *These lands are outside existing boundaries of local water and these lands also exhibit other qualities that make them suitable for future development.*

Low: *These lands should be precluded from intensive development until certain constraining conditions can be changed or corrected. Examples of such constraints include flooding and Williamson Act Lands.*

‘

From the process of mapping of the various factors potentially influencing the develop ability of the community and surrounding environs, a composite analysis of the application of these factors to each segment of the planning area is possible. The patterns, which emerged from this composite analysis, have enabled the overall developed suitability of the planning area to be mapped, in conformance with the ratings described above.

It is recommended, based on the Market Analysis, Opportunities and Constraints analysis as contained above the existing configuration of the Urban Development Boundary, as adopted is appropriate and reflective of the development suitability criteria contained above, except to include the Cutler PUD and Orosi PUD plan and surrounding areas consistent with the Sphere of Influence for the CPUD and OPUD.

Proposed Planning Areas

Policy Plan

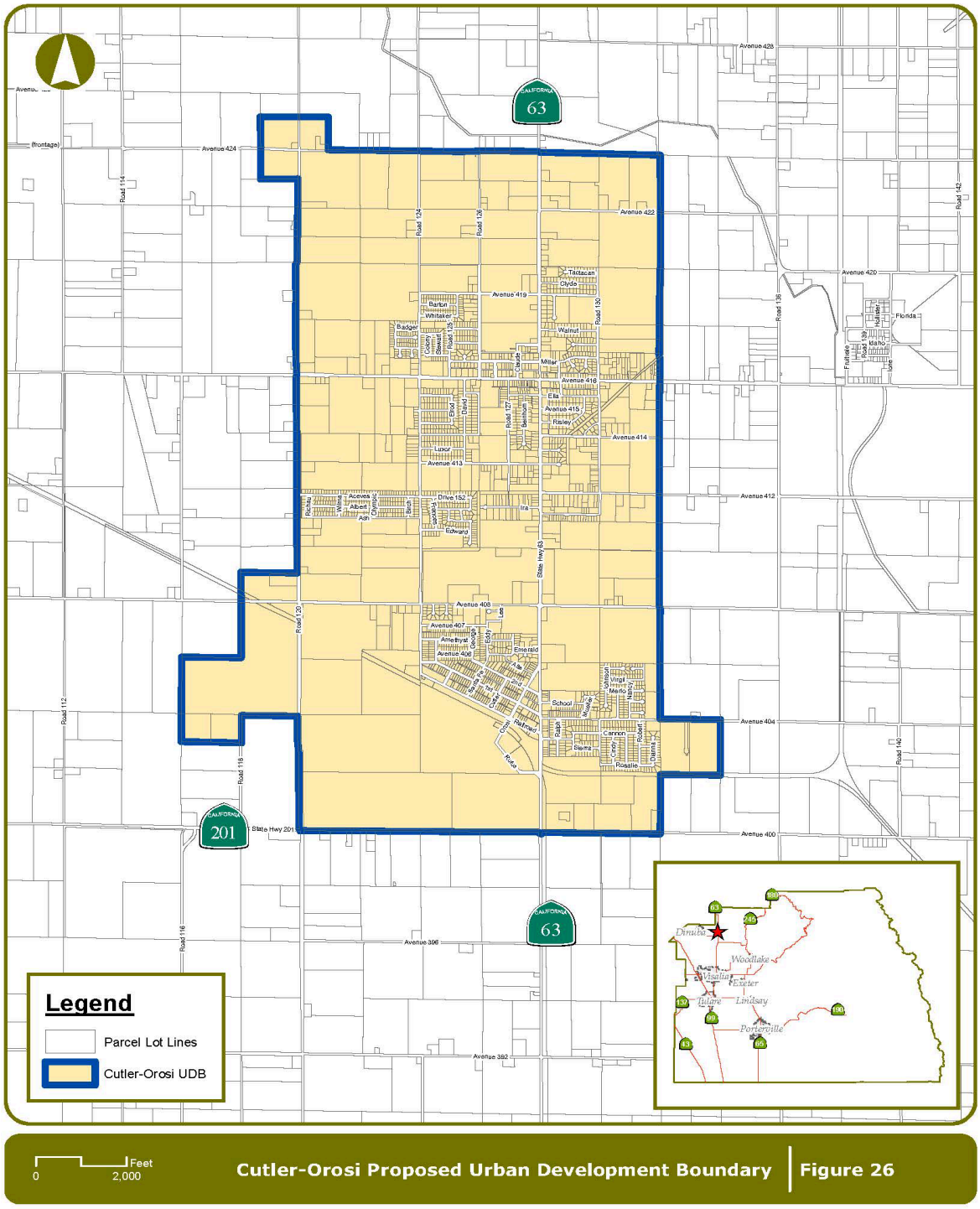
This chapter of the Cutler-Orosi Community Plan prescribes the policy framework, which will govern the development of the community over the term of the planning period (through the year 2030). It includes text, which sets out explicit policy statements about the quality, character, and manner in which development m the community will take place.

The plan, although long range in scope, is to be used on a day to day basis to guide the decisions of County staff, the Planning Commission, and the Board of Supervisors as they affect community development. Further, it will provide residents and property owners in the community with direction and guidelines regarding the evolution and growth of their town and its resources. In addition, importantly, this plan will aid other public agencies and entities, such as the school district and the water company, in their own long-range planning and capital expenditure programming. Each subsequent section of this chapter addresses a topical aspect of the community-planning environment. For each aspect, background discussion of relevant issues is included, policies are stated, and implementation programs and activities are outlined.

Proposed Urban Development Boundary

The Community Plan Update encompasses the Cutler Public Utility District and Orosi Public Utility District including the Cutler-Orosi Wastewater Treatment Plant. The Community Plan Update proposes approximately 712.1-acre expansion to the existing Urban Development Boundary (UDB), and amendments to land use and zoning designations. As such, the proposed Community Plan Update will expand the existing 2,441.9-acre UDB **(see Figure 26)** by approximately 29.2%, for a total UDB area of approximately 3,154.0-acres.

Figure 27 Proposed Urban Development Boundary



General Plan Consistency

Policy Relationship to the General Plan

The Cutler-Orosi Community Plan is a component in Part III of the Tulare County General Plan and, as such, has the same force and effect as any other adopted element of the general plan. Structurally, the Cutler-Orosi Community Plan is part of the Land Use and Circulation Element of the overall general plan. The principal emphasis of the community plan is on establishing local land use and circulation system patterns and prescribing associated standards and policies. In addition to the specific prescriptions of the community plan, the broader policies and standards of the overall Land Use and Circulation Element apply to Cutler-Orosi.

Also applicable to Cutler-Orosi, and governing all future development in the community, are the other elements (e.g. Planning Framework, Environmental Resources Management, Air Quality, Health and Safety, Transportation and Circulation, etc.) of the Tulare County General Plan. In instances where the policies and/or standards of the Cutler-Orosi Community Plan are more specific or more restrictive than those in other elements of the general plan, the community plan shall take precedence and prevail.

Proposed Land Use Plan and Zoning Districts

Land Use Plan

One of the most important purposes of the Cutler-Orosi Community Plan is to establish land use patterns and development policies and standards for the community for the planning period, through the year 2030. The general intent of the land use plan for Cutler-Orosi is to identify the most appropriate types and distribution of land uses for the community, based on environmental, circulation, infrastructure, services, opportunities and constraints, urban development boundary suitability analysis and other economic capacities and concerns discussed in the previous chapters of the plan.

The County of Tulare, through existing policies, has encouraged both incorporated and unincorporated communities to establish urban development and land use patterns, which are compact and contiguous. This policy position has reduced so-called "leap frog" development County-wide, has helped preserve agricultural lands, and has minimized land use conflicts between urban and agricultural areas. The Cutler-Orosi Community Plan 2021 Update analysis supporting the establishment of an Urban Development Boundary (UDB) for Cutler-Orosi is described, and the UDB is delineated. This boundary is sensitive to and consistent with the Countywide policy of encouraging compact and contiguous urban growth, and at the same time enables the community to accommodate any foreseen demand for economic and population expansion. **Figure 27** depicts and prescribes the proposed land use pattern development recommended for Cutler-Orosi.

As illustrated in this proposed land use diagram, future urban development of the community will be concentrated on SR 63 and Avenue 416. The land use plan for the community provides for substantial expansion of other commercial development along SR 63 and Avenue 416; provides for the development of additional commercial uses potentially serving community-oriented demand; and enables the development of additional residential uses to meet demand generated by forecasted

population growth.

Proposed Land Use Plan

As suggested above and based on the forecasted growth and the recommended Urban Development boundary, on the economic Development/Market Analysis and Opportunities and Constraints analysis, the proposed land use plan **(see Table 46 and Figure 27)**

Table 46 - Proposed Land Use Plan

Land Use	Sum Acres
General Commercial	237.2
High Density Residential	70.0
Light Industrial	236.4
Low-Medium Density Residential	817.8
Medium Density Residential	274.4
Mixed Use	7.3
Neighborhood Commercial	0.8
Public Recreation	11.9
Public/Quasi-Public	343.7
Service Commercial	108.1
Urban Reserve-Light Industrial	98.0
Urban Reserve-Medium Density Residential	566.0
Urban Reserve-Low Medium Density Residential	285.0
Urban Reserve-Mixed Use	77.1
Unclassified (Right-of-Way)	19.9
Total	3,154.0

Proposed Land Use Designations

The following land use designations along with descriptions including density and intensity are recommended for Cutler-Orosi to address land demand needs through the 2030 planning horizon year.

Mixed Use (MU)

This designation establishes areas appropriate for the planned integration of some combination of retail; office; single and multi-family residential; hotel; recreation; limited industrial; public facilities or other compatible use. Mixed Use areas allow for higher density and intensity development, redevelopment, or a broad spectrum of compatible land uses ranging from a single use on one parcel to a cluster of uses. These areas are intended to provide flexibility in design and use for contiguous parcels having multiple owners, to protect and enhance the character of the area. The consideration of development proposals in Mixed Use areas should focus on compatibility between land uses, and the development potential of a given area compared to the existing and proposed mix of land uses

and their development impacts. Density bonuses for residential units of 25 % to 35% may be granted, according to the Density Bonus Ordinance or State law, to Mixed Use areas to encourage the development of affordable housing units, compact development in the implementation of development strategies that support the use of mass transit, reduction of air impacts, and policies.

Maximum Density: 1-30.0 Dwelling Units/Acre
Maximum Intensity: 0.5 FAR

Urban Reserve (UR)
This designation establishes a holding zone whereby properties shall remain zoned for agriculture or open space use until such a time as conversion to urban uses is deemed appropriate. The UR designation shall be appended by the intended future land use designation, for example, Urban Reserve Commercial (UR) and Urban Reserve Residential (UR). When a rezoning occurs without a General Plan amendment, the UR designation shall be removed from the parcel. This designation applies primarily within UDBs.

Minimum Parcel Size: 1 Dwelling Unit per 10 Acres

Maximum Intensity: 0.02 FAR

Low Density Residential (LDR)
This designation establishes areas for single-family residences with individual homes on lots generally ranging from 12,500 square feet to one acre. Uses typically allowed include detached single-family homes; secondary dwellings; and residential support uses such as churches, schools, and other necessary public utility and safety facilities.

This designation is typically found inside communities or on the outside edge of UDBs.

Maximum Density: 1-4 Dwelling Units/Acre

Low-Medium Density Residential (LMDR)
This designation establishes areas suitable for single-family neighborhoods at relatively low densities on lots ranging from generally 5,000 to 12,500 square feet in urbanized areas. Uses typically allowed include detached single-family homes; secondary dwellings; and residential support uses such as churches, schools, parks, medical facilities, and other necessary public utility and safety facilities. This designation is used only within UDBs.

Medium Density Residential (MDR)
This land designation establishes areas for single-family and low-density multi-family dwellings. Uses typically allowed include single-family dwellings, second units, townhomes, duplexes, triplexes, and mobile home parks. This designation is used only within UDBs.

Maximum Density: 4-14 Dwelling Units/Acre

<u>High Density Residential (HDR)</u>
This designation established areas for multi-family dwellings in urbanized areas. Uses typically

allowed include duplexes, townhouses, and apartments located near schools, parks, and other public services. This designation is used only within UDBs. Dwelling Units are based on Gross Acreage and development shall be no less than that identified as the intensity per gross acreage High Density Residential designated lands.

Maximum Density: 14-30 Dwelling Units/Acre

Neighborhood Commercial (NC)
This designation establishes areas for small-scale, general retail, and service businesses that provide goods to the immediate surrounding area. Uses typically allowed include food and beverage retail sales; limited personal, medical, professional, and repair services; and retail sales. This designation is found primarily within UDBs.

Maximum Intensity: 0.5 FAR

General Commercial (GC)
This designation establishes areas for small, localized retail, recreational, and service businesses that provide goods and services to the surrounding community. Uses typically allowed include eating and drinking establishments; food and beverage retail sales; limited personal, medical, professional services; repair services; and retail sales. Such facilities may range from a single use to a cluster of uses such as a shopping center. This designation is found primarily within UDBs.

Maximum Intensity: 0.5 FAR

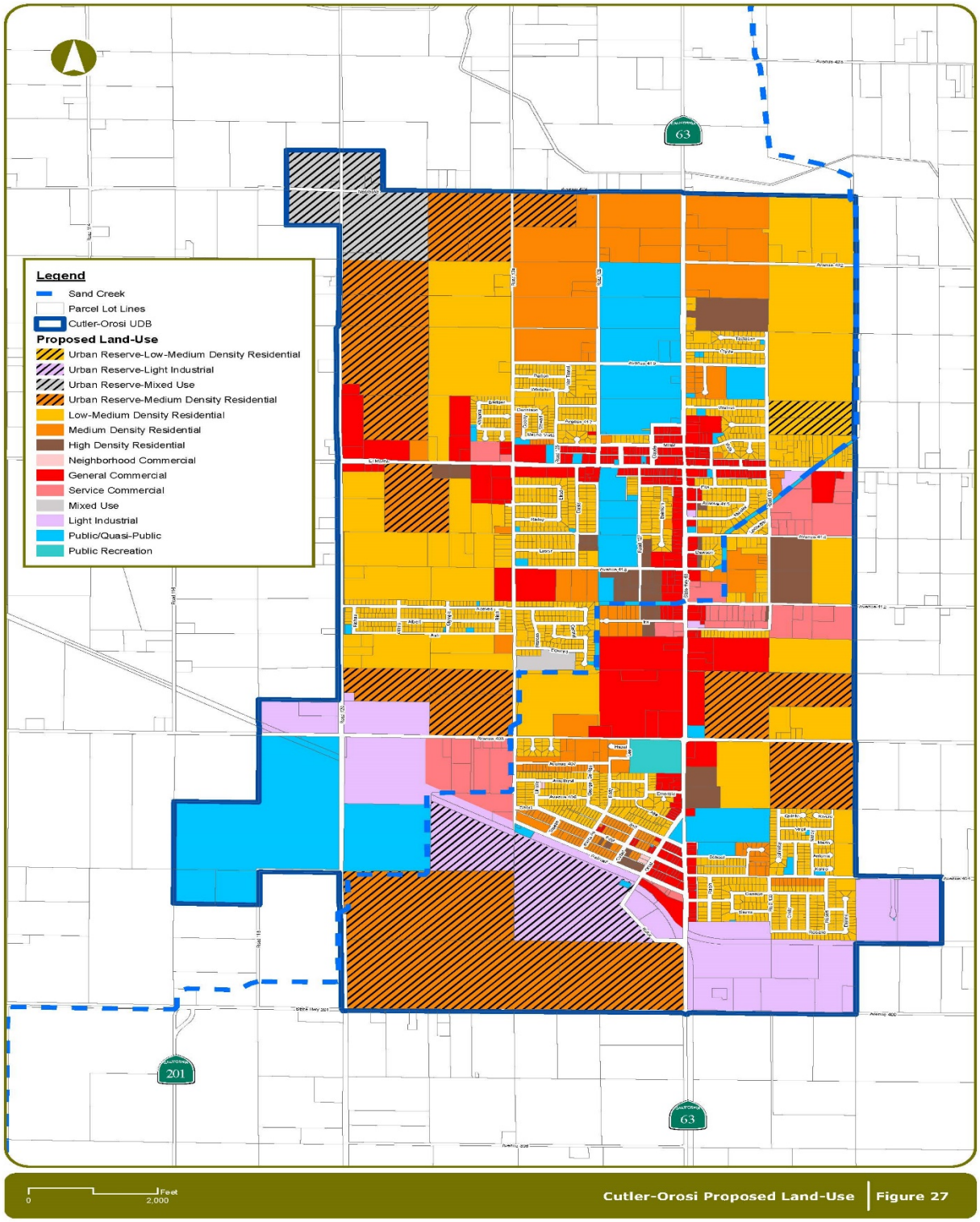
Service Commercial (SC)
This designation establishes areas for service commercial uses in urbanizing areas. Uses typically allowed include automotive-related or heavy equipment sales and services; building maintenance services; construction sales and services; and warehousing. This designation is found primarily within UDBs.

Maximum Intensity: 0.5 FAR

Light Industrial (LI)
This designation establishes areas for a range of non-intensive business park, industrial park, and storage uses that do not have detrimental noise or odor impacts on surrounding urban uses. Uses typically allowed include: warehousing; welding, and fabrication shops; manufacturing and processing; and business support uses such as retail or eating establishments that serve adjacent light industrial uses and employees. This designation is found primarily within UDBs and pursuant to regional growth corridor plans and policies.

Maximum Intensity: 0.5 FAR

Figure 28 - Proposed Land Use Plan - Cutler-Orosi



Heavy Industrial (HI)

This designation establishes areas for the full range of industrial uses, which may cause noise or odor impacts on surrounding urban uses. Uses typically allowed include manufacturing; processing; fabrication; ethanol plants; warehouses; asphalt batch plants; mills; wood processing yards; and support uses such as retail or eating establishments that support adjacent heavy industrial uses and employees. This designation is found both primarily within UDBs and pursuant to regional growth corridor plans and policies.

Maximum Intensity: 0.5 FAR

Proposed Zoning Districts

The proposed Zoning Districts Map **(see Figure 28)** for Cutler-Orosi is compatible to the Land Use Map outlined in the General Plan. Zoning changes that need to occur to allow the General Plan and Zoning Ordinance to be in conformity with each other **(see Table 47)**.

Table 47 - Proposed Zoning Districts

Zoning Districts	Acres
AE-10	893.8
C-1	0.3
C-1-MU	0.5
C-2-MU	253.3
C-3-MU	108.1
M-1	110.3
M-1-MU	127.5
M-2	39.9
R-1	805.9
R-1-MU	23.9
R-2	405.1
R-2-MU	15.3
R-3	30.1
R-3-MU	54.4
Unclassified (Right-of-Way)	285.6
Total	**3,154.0**
Source: Tulare County GIS	

Proposed Zoning Districts

The **MU (Mixed Use) Overlay Combining** Zone allows a mix of uses that promotes flexibility in the types of entitlements that can be issued. All uses outlined in the M-1, C-3, C-2, C-1, R-1, R-2, and R-3 uses are allowed.

The **R-1 (One Family)** Zone allows one-family dwellings units of a permanent character placed in permanent locations and one-family manufactured homes installed on a foundation system pursuant to Section 18551 of the California Health and Safety Code which comply with Subsection G of this Section. Private garages to accommodate not more than three (3) cars.

The **R-2 (Two Family)** Zone allows any use permitted in the R-1 Zone, two-family dwellings,

multiple dwellings subject to site review, and incidental and accessory uses to the aforesaid.

The **R-3 (Multiple-Family)** Zone is any use permitted in the R-2 Two-Family Zone. Multiple dwellings; provided, however, that if more than four (4) dwelling units are proposed to be constructed on one (1) lot, the construction of such units shall be subject to approval of a site plan pursuant to the procedure set forth in Paragraph 1 of Subsection G of Section 16.2 of this Ordinance.

The **C-1 (Neighborhood Commercial)** Zone is intended for retail stores and personal service businesses, which are appropriately located in close proximity to residential areas, while minimizing the undesirable impact of such uses in the neighborhoods, which they serve.

The **C-2 (General Commercial)** Zone is intended for retail stores and businesses, which do not involve manufacturing and/or processing.

The **C-3 (Service Commercial)** Zone is intended for wholesale establishments and establishments engaged in repairing and servicing equipment, materials and products, but which do not involve the manufacturing, assembling, packaging or processing of articles of merchandise for distribution and retail sales.

The **M-1 (Light Manufacturing)** Zone is intended for establishments engaged in the manufacturing, assembling, packaging, treatment and processing of products other than those which may be obnoxious or offensive by reason of emission of odor, dust, smoke, gas, noise, or other similar causes.

The **M-2 (Heavy Manufacturing)** Zone is intended for establishments engaged in the M-1 Zone, gas, boiler works, ovens, mills, canning, plastics, machining, quarry, wood processing and other similar causes.

Mixed Use - Any combination of retail/commercial, service, office, residential, hotel, or other use in the same building or on the same site typically configured in one (1) of the following ways:

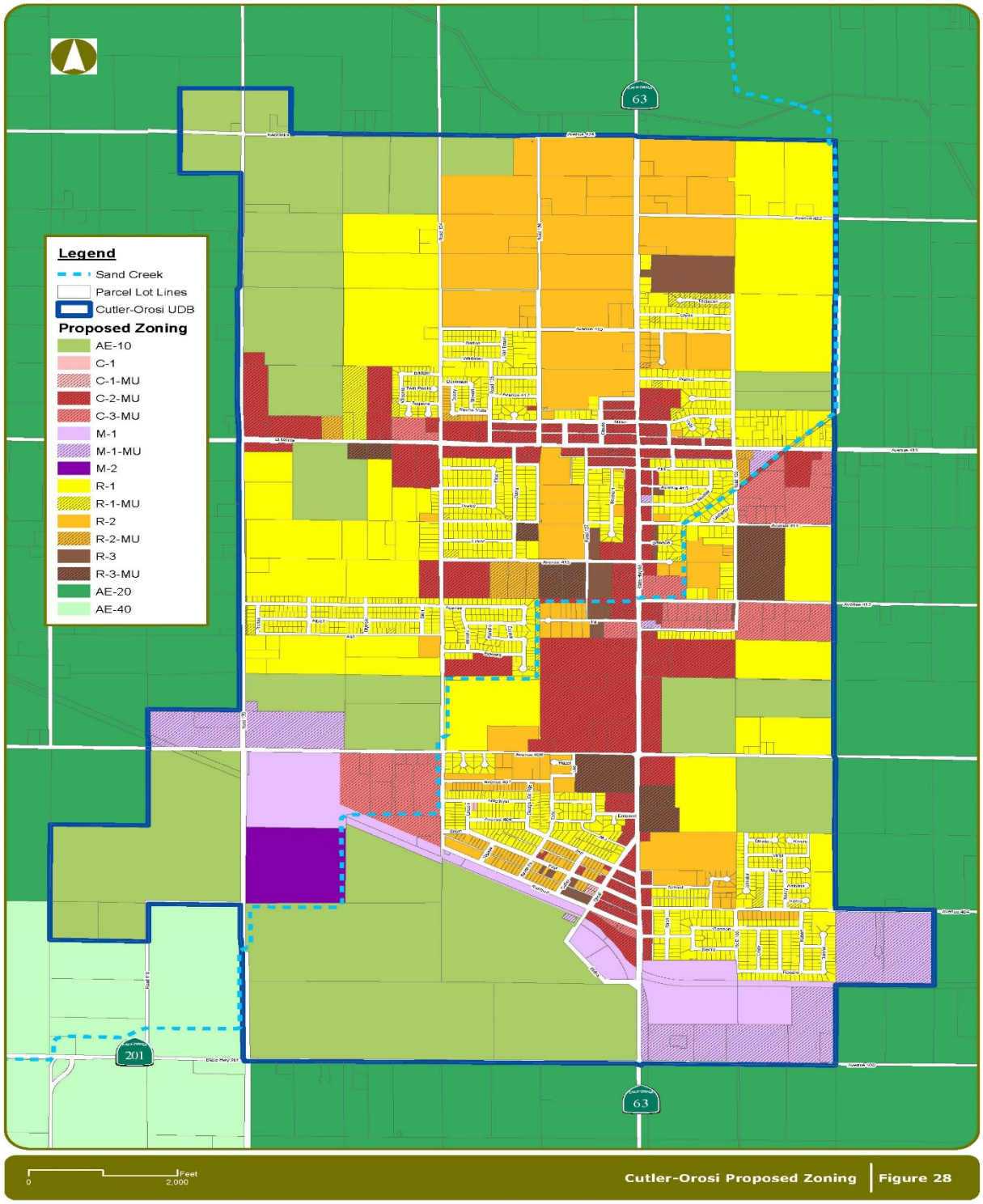
- **Vertical Mixed Use**. A single structure with the above floors used for residential or office use and a portion of the ground floor for retail/commercial or service uses.
- **Horizontal Mixed Use – Attached**. A single structure which provides retail/commercial or service use in the portion fronting the public or private street with attached residential or office uses behind.
- **Horizontal Mixed Use – Detached**. Two (2) or more structures on one (1) site which provide retail/commercial or service uses in the structure(s) fronting the public or private street, and residential or office uses in separate structure(s) behind or to the side.

Mixed Use allows for a variety of development projects. By allowing the community of Cutler-Orosi to respond to market forces, more opportunities are created for economic development and job development.

The **AE-10 (Exclusive Agricultural Zone 10 Acre Minimum)** The AE-10 Zone is an exclusive

zone for intensive and extensive agricultural uses and for those uses, which are a necessary and integral part of intensive and extensive agricultural operations.

Figure 29 - Proposed Zoning Districts Map



Circulation Element

The purpose of this Circulation Element Update for the community of Cutler-Orosi is to provide for a safe, convenient and efficient transportation system. The Circulation Element has been designed to accommodate anticipated transportation needs based on the land use element. In compliance with state law, all city and county general plans must contain a circulation element that designates future road improvements and extensions, addresses non-motorized transportation alternatives, and identifies funding options. The intent of this Circulation Element is to:

- Identify transportation needs and issues within Cutler-Orosi, as well as regional relationships that affect the transportation system;
- Consider alternatives to the single-occupant vehicle as means of providing services and access to facilities; and
- Establish policies that coordinate the Cutler-Orosi transportation and circulation system with General Plan and area plan land use maps and provide direction for future decision-making.

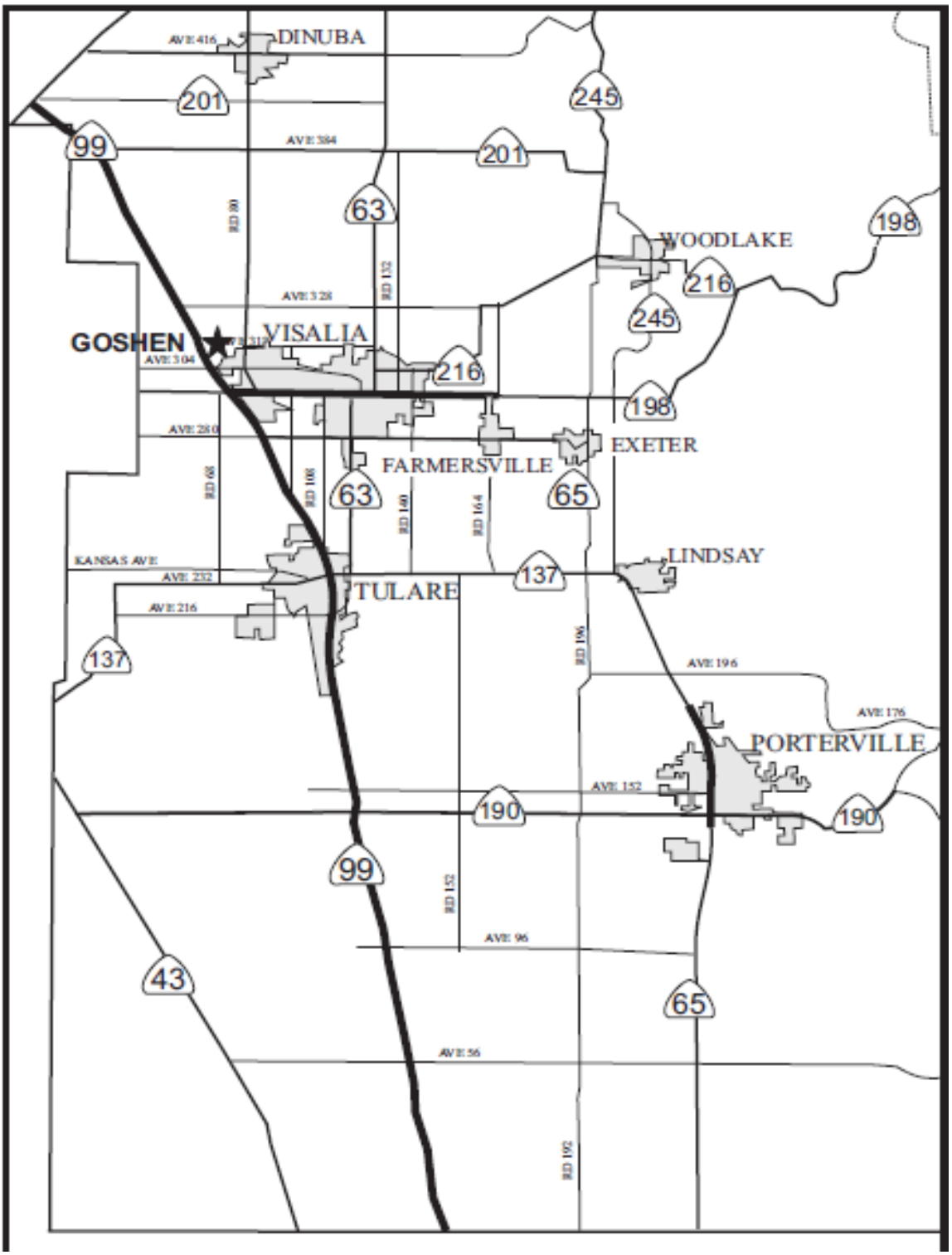
Figure 29 shows Cutler-Orosi in the context of its region. The transportation system within the Cutler-Orosi planning area includes SR 63, SR 201 and Avenue 416 as well as several County routes and local streets as shown on **Figure 30**. This figure also shows key intersections that were selected for detailed analysis.

Existing Transportation Conditions

Cutler-Orosi have an excellent circulation system in terms of access to other parts of the County. SR 201 and several County roads provide access to SR 99, 20 miles to the west, and the foothill region to the east. SR 99 is an important route used by industry to move goods to the southern and northern parts of the State. It also provides commuters with access to the Central Valley's larger metropolitan areas. SR 63 is another major north/south route in this region. It connects Cutler-Orosi with Visalia and it is the prime route between the two communities.

The communities also have a local circulation system, that when completed, will tie them together and create an excellent framework from which minor neighborhood streets can be built. Roads 120, 124, 128 SR 63, 130, and 136 traverse the planning area in a north/south fashion and Avenues 425, 416, 408, and 400 (SR 201) are laid out on an east-west axis. Several roadways must either be built or widened in order to create an efficient circulation system. Most notably, there is an absence of a north-south road east of SR 63 which would connect Cutler to Orosi, and a road system southwest of Cutler which would "open up" land for industrial development.

Figure 30 - Roadway Network of County



The internal circulation system of Cutler-Orosi is composed of paved streets with a curb-to-curb width of 40 feet. These "minor" streets provide circulation within each neighborhood of the community. Although they all have ample capacity for additional traffic, the condition of some of these streets is poor because they lack curbs and/or gutters or their pavement condition is deteriorating. Further, there are numerous areas in Orosi, which are composed of large-lot rural residential development and are not "linked" to adjacent neighborhoods.

Street and Highway System

Functional classification is the process by which streets and highways are grouped into classes according to the type of service they provide. Streets and highways are classified according to their primary function and may be assigned into several basic classifications:

- State Highways (which may be freeways, expressways or conventional highways)
- Arterials and Collectors
- Local Streets

State Highways connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas. There are two designated State Routes within the Planning Area.

- State Route 63
- State Route 201

Arterials serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets. There is one designated "Arterial" street within the Planning Area.

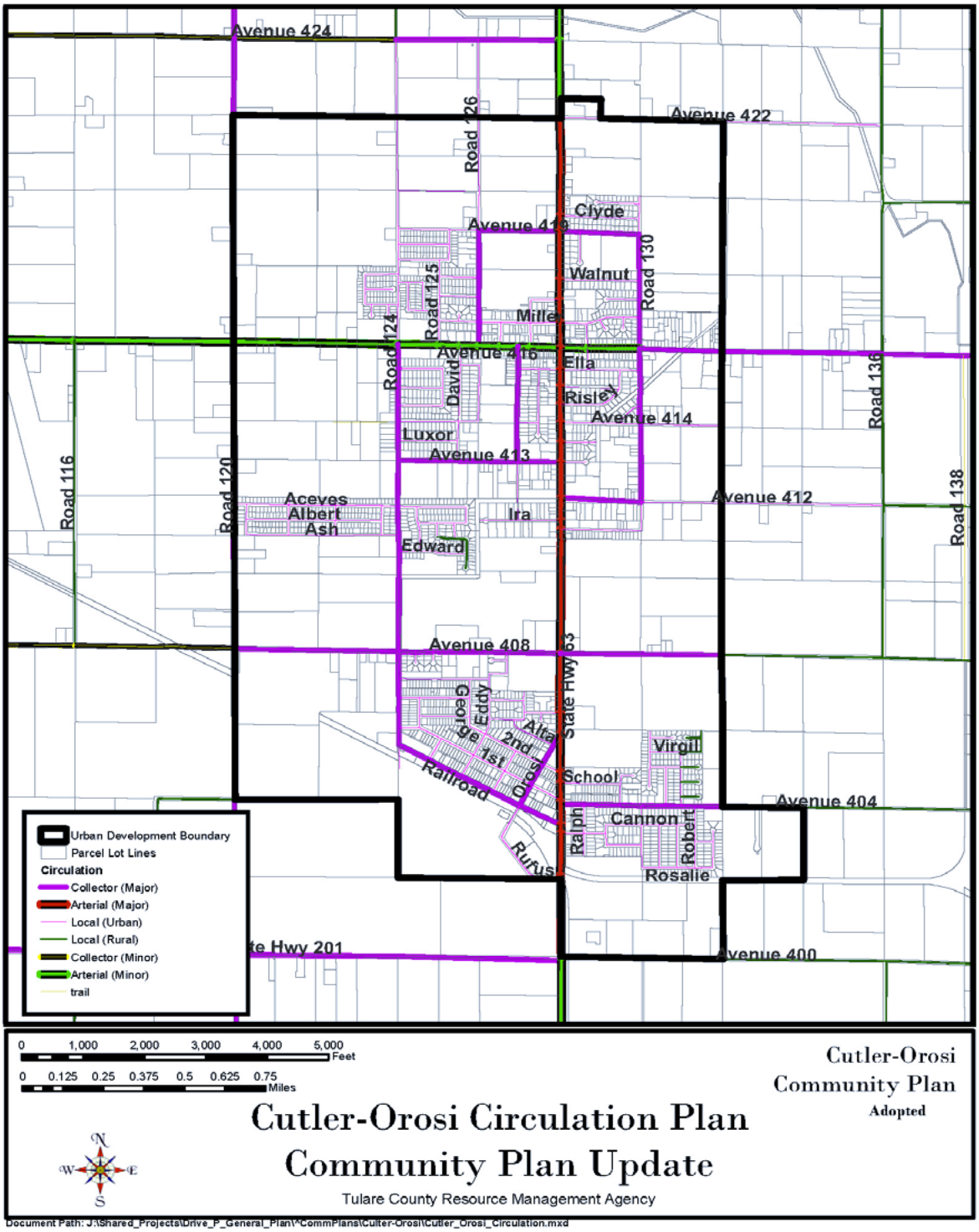
- Avenue 416

Collectors provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.

Local streets provide for direct access to abutting properties and for localized traffic movements within residential, commercial and industrial areas.

- All streets in the Circulation network are classified as local streets.

Figure 31 - Community of Cutler-Orosi Circulation Plan



Regional Transportation Planning

Tulare County Association of Governments (TCAG) Regional Transportation Plan

The Regional Transportation Plan (RTP) is a multi-modal, long-range planning document prepared by the Tulare County Association of Governments (TCAG). The RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances for Tulare County. The RTP is prepared every four years and contains a listing of projects considered to be financially feasible within a 25-year planning time frame. All federally funded transportation projects must be consistent with the RTP.

The RTP for Tulare was last updated and adopted in July 2018[52]. The 2018 RTP is the second iteration in response to state legislation (SB 375) that requires that the RTP show reductions in greenhouse gas emissions from passenger vehicles (the 2014 RTP was the first iteration). Thus, there is a new emphasis in the RTP on promoting ridesharing (transit, van and carpools) and active transportation (walking and bicycling). To this end, the RTP now includes a Sustainable Communities Strategy (SCS), a blueprint for land use patterns and transportation facilities and services that will facilitate fewer vehicle trips and vehicle miles traveled. TCAG is in the process of updating the 2018 RTP with a 2022 version anticipated for completion in 2022.

San Joaquin Valley Air Quality Management Plan

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has prepared the Air Quality Management Plan (AQMP) and various other regulations to reduce air emissions. Both the plan and several regulations aim to reduce emissions from mobile sources – automobiles and trucks, as well as other modes of transportation.

Measure R ½ Percent Sales Tax for Transportation

Measure R is the half-percent sales tax measure for transportation improvements passed by the voters of Tulare County in 2006 and managed by the Tulare County Transportation Authority (TCTA). The Measure provides funding for transportation projects (highway, transit, and ridesharing) over the 20-year duration of the Measure. Measure R funds are used by the County in Cutler-Orosi to repair streets, and to improve the existing and planned transportation system.

Public Transit and Active Transport Systems

"While the private automobile is the dominant mode of travel within Cutler-Orosi, as it is throughout Tulare County, other modes of transportation are important. The latest available Census survey data for Cutler-Orosi indicates that about 57 percent of commuters drive alone to work, while 43 percent use other means: 29 percent carpool or vanpool, 4 percent walked, 0 percent used public transportation and 1 percent worked at home."[53] The most recent available Census survey data for Cutler-Orosi indicates that about two-third of commuters drive alone to work, while one-third use other means: 16.2 percent carpool or vanpool, 1.4 percent walked, 0 percent used public

[52] TCAG. RTP Checklist for MPOs. Accessed July 2021 at: https://tularecog.org/tcag/planning/rtp/rtp-20181/rtp-checklist/

[53] Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS). Page 22. Prepared by VRPA Technologies, Inc. and included in Appendix "E" of the Update's Draft EIR.

transportation and 9.0 percent worked at home.[54] While Cutler's data shows 67.4 drove alone, 20.1 carpooled, 11.7 percent worked from home, and 0 percent walked, bicycled, or used other means.[55]

"The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips, but tend to be less concentrated in peak traffic periods. Off-peak trips also tend to have a greater proportion of shared ride and active (walk and bike) trips."[56] "While congestion is not a major issue in Cutler-Orosi, overreliance on automobiles creates other costs for both society and households, and means that many in the community who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycles and walking. The public transit system alternatives for Cutler-Orosi include fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services."[57]

Transportation Demand Management

Transportation Demand Management (TDM) strategies reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility. Examples of TDM strategies include telecommuting, flexible work hours, and electronic commerce that enable people to work and shop from home. According to CalVans, the major vanpool broker in the Valley, vanpools are becoming more prevalent for short-to-medium range commute trips, as well as for traditional long-distance usage: Key vanpool users include agricultural workers, and employees at large firms and government agencies. Park-n-ride facilities and carpooling will also continue to be a significant link between highway and transit modes. For the remainder of the study area, an overall rate of traffic growth of one percent per year was determined to be a reasonable forecast assumption. It is not likely that TDM strategies would be very effective due to Popular/Cotton Center's current and projected small population and lab

Road Capacity and Level of Service (LOS)

LOS is categorized by two parameters, uninterrupted flow and interrupted flow. Uninterrupted flow facilities have no fixed elements, such as traffic signals, that cause interruptions in traffic flow (e.g., freeways, highways, and controlled access, some rural roads). Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs and signalized intersections. The definitions and measurements used for determining level of service in interrupted and uninterrupted conditions are shown in **Tables 48 and 49.**

In Tulare County, General Plan Policy **TC – 1.16 County Level of Service (LOS) Standards** states; "The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual."[58]

[54] 2010 U.S. Census for Orosi https://data.census.gov/cedsci/profile?g=1600000US0654372 and for Cutler https://data.census.gov/cedsci/table?q=Cutler%20CDP&tid=ACSST5Y2019.S0801

[55] Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS). Page 22. Prepared by VRPA Technologies, Inc. and included in Appendix "E" of the Update's Draft EIR

[56] Ibid.

[57] Op. Cit.

[58] *Tulare County General Plan 2030 Update, Part 1 – Goals and Policies Report. Page 13-7.*

Table 48 - Uninterrupted Traffic Flow Facilities	
LEVEL OF SERVICE	**DEFINITION**
A	Describes free-flow operations. Free-Flow Speed (FFS) prevails on the freeway, and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.
B	Represents reasonably free-flow operations, and FFS on the freeway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.
C	Provides for flow with speeds near the FFS of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.
D	At this level speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.
E	Describes operation at capacity. Operations on the freeway at this level are highly volatile because there are virtually no useable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing, the physical and psychological comfort afforded to drivers is poor.
F	Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks. Breakdowns occur for a number of reasons: • Traffic incidents can temporarily reduce the capacity of a short segment, so that the number of vehicles arriving at a point is greater than the number of vehicles that can move through it. • Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles that can be discharged. • In analyses using forecast volumes, the projected flow rate can exceed the estimated capacity of a given location.

Table 49 - Interrupted Traffic Flow Facilities	
LEVEL OF SERVICE	**DEFINITION**
A	Describes operations with a control delay of 10 s/veh or less and a volume-to- capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Describes operations with a control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A, with reasonably unimpeded travel between intersections.
C	Describes operations with control delay between 20 and 35 s/veh and a volume-to- capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e.one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. May be longer queues and operations between locations may be more restricted.
D	Describes operations with control delay between 35 and 55 s/veh and a volume-to- capacity ratio no greater than 1.0. Travel speeds are about 40 percent below free flow speeds. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent. Average travel speed is one-third of free flow speeds. The facility is generally at full capacity.
F	Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue. Extremely slow speeds with average delay of 80 seconds or more. Frequent stop and go conditions.

Transportation Concept Report (TCR) State Route (SR) 63

The TCR defines the appropriate route concept level of service (LOS) and facility type(s) for SR 63. The route is currently operating at a LOS of "B" and "C." By the year 2020, in some segments it will drop to a LOS "D" and "E". Route Segment 10 runs between 0.1 mile north of Avenue 403 to Avenue 422 and is the ultimate transportation corridor concept.

Complete Streets

The Board of Supervisors approved the Complete Streets Program on December 2016 **(see Attachment A-6)**. The Complete Streets Programs Goals, Policies, Objectives, and Standards are hereby incorporated by reference. Included in the plan were policies and implementation measures as provided below. These projects have been included on the TCAG Measure R list as Complete Streets.

Cutler

1. George Road/2nd Drive – Avenue 407 to SR 63
2. Avenue 408 – Road 124 to SR 63
3. Railroad Drive – SR 63 to Road 124
4. Avenue 404 – SR 63 to Robert Road
5. First Drive – SR 63 to Road 124

Orosi

1. Avenue 413 – Road 124 to SR 63
2. Avenue 419
3. Avenue 416 – SR-63 to Dinuba
4. Road 130 (Strong interest from school district)
5. Road 124

Goals, Policies, and Standards

The intent of the Cutler-Orosi Community Circulation Element is to establish a comprehensive multi-modal transportation system that is efficient, environmentally and financially sound, and coordinated with the Land Use Element.

Goal 1: Design and implement a multi-modal transportation system that will serve projected future travel demand, minimize congestion, and address future growth in Cutler-Orosi.

Policies and Standards:

1. Utilize existing infrastructure and utilities to the maximum extent practical and provide for the logical, timely, and economically efficient extension of infrastructure and services.
2. Designate streets according to the following functional classifications:
   a) Freeways and Expressways carry regional traffic through the community with access only at interchanges with major streets.
   b) Arterials serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the urban area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.
   c) Collectors provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.
   d) Local streets provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

   All facility-types above (except freeways) should be capable of accommodating transit and paratransit vehicles. Furthermore, all facility-types except freeway should include provisions for active modes of transportation (walking and cycling).
3. Develop and apply consistent standards for new streets (and existing streets where feasible without substantial ROW takes) based on the roadway classification.
4. Require applicants for new development projects to dedicate needed ROW and construct and/or upgrade to County standards the streets and roads that will serve their projects.
5. Plan new arterial and collector streets as needed to improve access and enhance the develop potential of land designated for commercial and industrial uses.
6. Improvement standards for local and minor streets shall include perpendicular curbs, gutters and adequate street lighting at intersections.
7. Access to arterials by driveways, local and minor streets, and alleys should be controlled as needed in order to ensure efficient traffic flow and safety along these streets.
8. Local streets should be designed to discourage high traffic volumes and through traffic.
9. Develop a Circulation Map showing the public street system. Designated streets and recommended rights-of-way should be indicated on this map.
10. Allow standards for new street development to be altered or refined where it can be demonstrated that projected traffic flows can be accommodated.
11. Plan for peak-hour Level of Service (LOS) "D" or better throughout the circulation network.
12. Make intersection improvements to the existing major street system selectively, favoring traffic engineering solutions rather than major structural improvements. This could include

signalization, intersection channelization, use of directional signs, and diversion of traffic onto underutilized streets.

13. Use Complete Streets concepts in the design of new local streets where such techniques will improve safety and manage traffic flow.
14. Ensure the street network provides efficient routes for emergency vehicles, meeting necessary street widths, turn around radius, and other factors as determined by the County in consultation with fire and other emergency service providers.
15. Cooperate with local, regional, State and federal agencies to plan for, establish and maintain good connectivity to an efficient multimodal regional transportation system.

Goal 2: Provide designated routes and loading standards that reduce the noise and safety concerns associated with truck traffic.

Policies and Standards:

1. Designate truck routes for use by heavy commercial and industrial traffic. Initially, designated truck routes shall be:
    - SR 63
    - SR 201
    - Avenue 416
2. Design interior street systems for commercial and industrial subdivisions to accommodate the movement of heavy trucks.
3. Restrict heavy-duty truck through-traffic in residential areas and plan land uses so that trucks do not need to traverse these areas.

Design off-street loading facilities for all new commercial and industrial developments so that they do not face surrounding roadways or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted by the County Engineer.

Goal 3: Provide safe and convenient pedestrian access between residential neighborhoods, parks, open space, and schools that service those neighborhoods.

Policies and Standards:

1. Provide a safe walking environment for pedestrians.
    a) New development should include safe and pleasant designs, which promote pedestrian access to arterials and collectors and consider the location of community services, such as schools, parks and neighborhood shopping activity centers in the accessibility of their design for all persons.
    b) Require the installation of sidewalks as an integral part of all street construction where appropriate.
    c) Require street lighting within the rights-of-way of all public streets.
    d) Include pedestrian signal indicators as an integral part of the installation of traffic signals.

2. Maximize visibility and access for pedestrians and encourage the removal of barriers (walls, easements, and fences) for safe and convenient movement of pedestrians. Special emphasis should be placed on the needs of disabled persons considering ADA regulations.
3. Plan for pedestrian access consistent with road design standards while designing street and road projects. Provisions for pedestrian paths or sidewalks and timing of traffic signals to allow safe pedestrian street crossing shall be included.
4. Collaborate with the Cutler-Orosi Schools and the School District to ensure that schoolchildren have adequate transportation routes available, such as a local pedestrian or bike paths, or local bus service.
5. Encourage safe pedestrian walkways within commercial, office, industrial, residential, and recreational developments that comply with the Americans with Disabilities Act (ADA) requirements.
6. Coordinate with TCaT and private bus operators to ensure that pedestrian facilities are provided along and/or near transit routes, whenever feasible. New land developments may be required to provide pedestrian facilities due to existing or future planned transit routes even if demand for a pedestrian facility is not otherwise warranted.
7. Review all existing roadways without pedestrian facilities when they are considered for improvements (whether maintenance or upgrade) to determine if new pedestrian facilities are warranted. New roadways should also be assessed for pedestrian facilities.

Goal 4: Ensure the provision of adequate off-street parking for all land uses.

Policies and Standards:

1. Require all new development to identify adequate on street and off-street parking based on expected parking needs.
2. Encourage shared parking among nearby uses with complementary parking demand patterns.
3. Provide adequate loading areas within off-street parking areas for all commercial and manufacturing land uses.
4. Anticipate parking needs at proposed and expected activity centers, particularly commercial areas.

Goal 5: Provide a transportation system that is integrated with the region.

Policies and Standards:

1. Coordinate local transportation planning with the TCAG Congestion Management Plan to ensure eligibility for state and federal funding.
2. Incorporate the Regional Transportation Plan, and the Tulare County Short- and Long-Range Transit Plans into the Community Plan Circulation Element, and encourage the active participation of Caltrans in the design of highway capital improvement projects.

Goal 6: Encourage the use of public transit services to reduce reliance on the automobile.

Policies and Standards:

1. Encourage transit alternatives to meet the basic transportation needs of the young, the elderly, the handicapped, and people without access to an automobile.
    a) Consider development of an integrated transit center within Cutler-Orosi where all transit services can connect with each other as well as with private ridesharing.
    b) Encourage and provide for ridesharing, park and ride, and other programs that can reduce emissions, save energy, and reduce monetary costs for firms and workers.
2. Planning and development of arterial and collector streets shall include design features which can be used as future public transit stops.
3. Support the expansion and improvement of transit systems and ride sharing programs to reduce the production of automobile emissions.
4. Support the use of alternate fuel vehicles and fueling stations for public transit vehicles, and County public agency vehicles.
5. Support TCaT and other transit operators' programs to foster transit usage.
6. Support all operator efforts to maximize revenue sources for short and long range transit needs that utilize all funding mechanisms available including federal grants, state enabling legislation, and farebox revenue. This can be accomplished through TCAG and the Tulare County Transit Agency (TCaT) through the development of the Short and Long Range Transit Plans.
7. Support programs developed by transit agencies/operators to provide paratransit service.
8. Incorporate the potential for public transit service in the design of developments identified as major trip attractions (i.e. community centers and employment centers).
9. Explore potential development of a park-n-ride lot in Cutler-Orosi.
10. Support continued improvements to AMTRAK rail passenger service within Tulare County and throughout the San Joaquin Valley.

Goal 7: Provide efficient goods movement

Policies and Standards:

1. Encourage the efficient movement of goods and people by rail through a shift of a portion of the goods previously moved by trucks onto the rail freight system.
2. Implement Street and highway projects to provide convenient and economical goods movement, including access to rail terminals, in areas where large concentrations of truck traffic exist.
3. Identify street and highway improvement and maintenance projects that will improve goods movement and implement projects that are economically feasible.
4. Encourage use of rail for goods movement whenever feasible.

Goal 8: Provide safe and convenient facilities for non-motorized modes of transportation that enhance the future livability and character of Cutler-Orosi.

Policies and Standards:

1. Consider developing a Bikeway plan for Cutler-Orosi based on the following facility designations:

a) Bike Path (Class I). A special pathway for the exclusive use of bicycles, which is separated from motor vehicle facilities by space or a physical barrier. It is identified by guide signing and pavement markings.
b) Bike Lane (Class II). A lane on the paved area of a road for preferential use by bicycles. It is usually located along the right edge of the paved area or between the parking lane and the first motor vehicle lane. It is identified by a "Bike Lane" guide sign, special lane lines, and other pavement markings.
c) Bike Route (Class III). A recommended route for bicycle travel along existing rights-of-way, which is signed but not striped.
d) Bikeway. All facilities that explicitly provide for bicycle travel. The bikeway can be anything from a separate facility to a simple signed street.

2. Give priority to bikeways that will serve the highest concentration of cyclists and destination areas of highest demand, especially Cutler-Orosi Elementary Schools.
3. Provide bikeways in proximity to major traffic generators such as commercial centers, schools, recreational areas, and major public facilities.
4. Develop a visually clear, simple, and consistent bicycle system with standard signs and markings, as designated by the State of California Traffic Control Devices Committee and the State Bikeway Committee.
5. Support the installation of bike parking racks at public and private places of assembly such as parks, schools, employment sites, churches, and retail commercial developments.
6. Provide non-motorized alternatives for commuter travel as well as recreational opportunities.
7. Provide separate rights-of-way for non-motorized facilities whenever economically and physically feasible.
8. Develop bikeways in compliance with the standards established in the Caltrans Highway Design Manual or other appropriate standards.

Goal 9: Design, construct, and operate the transportation system in a manner that maintains a High level of environmental quality.

Policies and Standards:

1. Control dust and mitigate other environmental impacts during all stages of roadway construction.
2. Protect residents from transportation generated noise hazards. Increased setbacks, walls, landscaped berms, other sound absorbing barriers, or a combination thereof shall be provided along four lane highways in order to protect adjacent noise-sensitive land uses from traffic generated noise impacts. Additionally, noise generators such as commercial, manufacturing, and/or industrial activities shall use these techniques to mitigate exterior noise levels to no more than 60 decibels.
3. Review and monitor proposals for expansion of pipelines for the transport of suitable products and materials, and require mitigation of environmental impacts.
4. Encourage the use of non-polluting vehicles for both public and private uses.
5. Include noise mitigation measures in the design of roadway projects in Cutler-Orosi.

Goal 10: Support the use of Transportation Demand Management (TDM) strategies to reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility along congested corridors.

Policies and Standards:

1. New development shall consider Transportation System Management and Transportation Demand Management as strategies for the mitigation of traffic and parking congestion. Public transit, traffic management, ride sharing and parking management are to be used to the greatest extent practical to implement transportation management strategies.
2. Coordinate with Caltrans, TCAG, transit agencies and other responsible agencies to identify the need for additional park-n-ride facilities along major commuter travel corridors.

Goal 11: Utilize Intelligent Transportation Systems (ITS) to improve the safety and performance of the surface transportation system using new technology in detection, communication, computing, and traffic control.

Policies and Standards:

1. Encourage the integration of Intelligent Transportation Systems (ITS) consistent with the principles and recommendations referenced in the TCAG Regional Transportation Plan

Bicycle Facilities

The 2014 Regional Transportation Plan (adopted June 30, 2014) prepared by the Tulare County Association of Governments (TCAG) provides for a regional bicycle network intended to provide a safe alternative mode of travel. The 2010 Tulare County Regional Bicycle Transportation Plan **(see Figure 31)** has a proposed Class II Bike Project.[59] In Tulare County, bicycle travel is not yet considered a major mode of transportation and bicycles are rarely seen outside of cities and towns.

The Caltrans Highway Design Manual (HDM), which governs bicycle facility design in California, distinguishes three (3) different types of bicycle facilities.

Class I: Bike path providing completely separated right-of-way designated for the exclusive use of bicycles and pedestrians. In Tulare County Class I facilities will primarily be implemented through TCAG. Currently there is a proposed Class I on Avenue 416.

Class II bikeways that provides designated lanes for the use of bicycles through the use of striping on the roadway and signage designations for the facility. No proposed Class II bicycle facilities in the Cutler-Orosi area.

Class III: Bikeway that provides designation by signage. Roadways are shared between bicyclists and motorists. Class III facilities in Tulare County are envisioned to be implemented along the

[59] TCAG Action Element, TCAG 2014 Regional Transportation Plan. Page 3-89.

major circulation segments of roadway that connect the overall County roadway network. Class III bicycle facilities are not proposed in Cutler-Orosi areas.

Although not signed on many local roads in Cutler-Orosi, bicyclists are allowed to use the side of the road or share the road on all County roadway facilities excluding freeways.

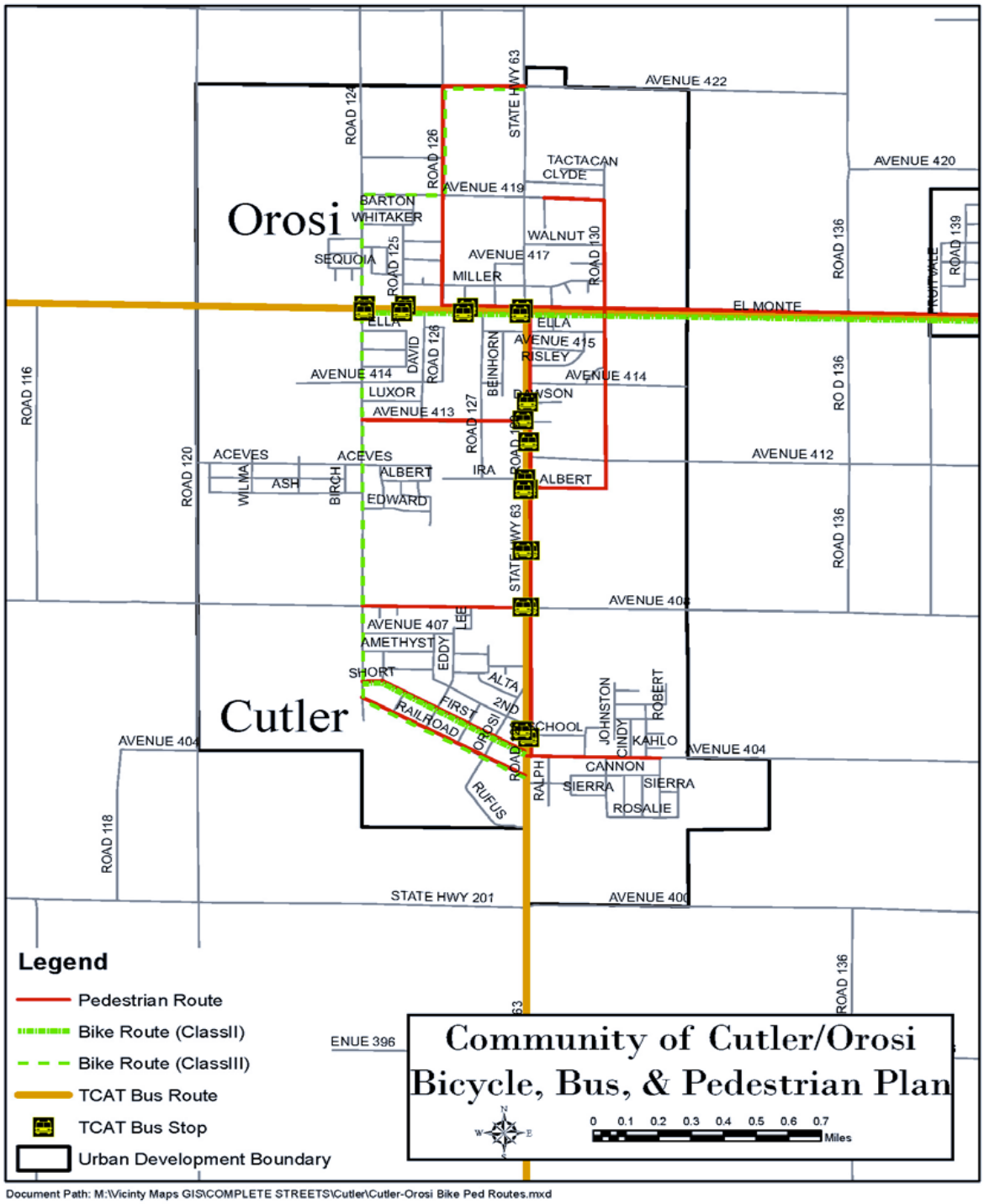
Multiuse Trails

Multiuse trails are facilities that can be used by bicycles, pedestrians, equestrians, and other recreational users. No multiuse trails exist or are proposed in Cutler-Orosi.

Pedestrian Paths and Sidewalks

A review of facilities for pedestrian travel in Cutler-Orosi presents a broad array of conditions in which pedestrians are accommodated. Currently, limited continuous sidewalks are provided along major routes in the community. In addition to connecting available pedestrian resources, the communities have prioritized the competition of sidewalks along safe routes to school. Enhanced pedestrian crossings and sidewalks is considered in areas where high pedestrian demand occurs (such as to and around schools).

Figure 32 - Cutler-Orosi Bicycle & Pedestrian Plan



Paratransit Service

"Paratransit Services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped."[60]

Park-and-Ride Lots

Park-and-Ride lots provide places for people to meet up and carpool to areas outside of the Community. A Park and Ride facility could also provide a compressed natural gas refueling station. As the Community's population grows and given the large number of commuters, a park-and-ride location would be best sited near the edges of the Community along State Route 65.

Transit and Bus Stops

The Tulare County Area Transit Agency (TCaT) operates fixed-route services that link communities with each other and with Visalia and Dinuba's urban transit systems. Cutler-Orosi **(see Figure 32)** is connected via TCaT North County Route 10. Route 10 **(see Figure 33)** has twelve northbound and southbound buses serving Cutler-Orosi on weekdays and four buses in each direction on Saturdays and Sundays. Stops are currently located at the Road 1287 and School Avenue in Cutler-Orosi has two stops at R-N Market and Orosi Mart & Deli. (See TCaT website at http://www.tularecog.org/bustimes/. TCaT vehicles are wheelchair accessible and all full size buses include bike racks. As such, public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a community of less than one thousand residents. The low level of auto congestion in Cutler-Orosi, now and as forecasted into the future, suggests that driving will continue to be more convenient in rural communities than the use of transit for those with access to a private car.

[60] Cutler-Orosi Community Plan Update Transportation Impacts Study (TIS). Page 21. Prepared by VRPA Technologies, Inc. and included in Appendix "E" of the Update's Draft EIR

Figure 33 – TCaT North County Route 10

Figure 34 - TCaT Route 10 Bus Schedule

Northbound

WEEKDAY SERVICE

VISALIA ❶ Transit Center	VISALIA Justice Complex	SEVILLE Seville Market	CUTLER Rd. 128 & School Ave	E. OROSI Ave. 416 & Yone Rd.	OROSI R-N Market	OROSI Orosi Mart & Deli	SULTANA Ave. 416 & Rd. 104	DINUBA K-Mart	DINUBA Transit Ctr
6:15	6:34	—	6:44	—	6:48	6:50	6:54	6:57	7:04
7:15	7:34	—	7:44	—	7:49	7:51	7:55	7:58	8:05
8:15	8:34	—	8:44	8:49	8:53	8:55	8:59	9:02	9:09
9:10	9:29	9:40	9:49	—	9:53	9:55	9:59	10:02	10:09
10:15	10:34	—	10:44	10:51	10:55	10:57	11:01	11:04	11:11
11:15	11:34	—	11:44	—	11:48	11:50	11:54	11:57	**12:05**
1:15	**1:34**	—	**1:44**	—	**1:48**	**1:50**	**1:54**	**1:57**	**2:04**
2:10	**2:29**	**2:40**	**2:49**	—	**2:53**	**2:55**	**2:59**	**3:02**	**3:09**
3:15	**3:34**	—	**3:44**	—	**3:48**	**3:50**	**3:54**	**3:57**	**4:04**
4:15	**4:34**	—	**4:44**	—	**4:48**	**4:50**	**4:54**	**4:57**	**5:04**
5:15	—	—	**5:40**	—	**5:44**	**5:46**	**5:50**	**5:53**	**6:00**
6:15	—	**6:36**	**6:45**	—	**6:49**	**6:51**	**6:55**	**6:58**	**7:05**

WEEKEND SERVICE

10:25	10:44	—	10:54	—	10:58	11:00	11:04	11:07	11:14
1:09	**1:28**	—	**1:38**	—	**1:42**	**1:44**	**1:48**	**1:51**	**1:58**
2:58	**3:17**	—	**3:27**	—	**3:31**	**3:33**	**3:37**	**3:40**	**3:47**
4:47	**5:06**	**5:17**	**5:27**	—	**5:31**	**5:33**	**5:37**	**5:40**	**5:47**

Southbound

WEEKDAY SERVICE

DINUBA Transit Ctr	DINUBA K-Mart	SULTANA Ave. 416 & Rd. 104	OROSI Orosi Mart & Deli	OROSI R-N Market	E. OROSI Ave. 416 & Yone Rd.	CUTLER Rd. 128 & School Ave	SEVILLE Seville Market	VISALIA Justice Complex	VISALIA ❶ Transit Center
6:15	6:21	6:24	6:28	6:30	—	6:34	—	6:45	7:05
7:10	7:17	7:20	7:24	7:26	—	7:30	7:40	7:51	8:10
8:15	8:21	8:24	8:28	8:30	—	8:34	—	8:45	9:05
9:15	9:21	9:24	9:28	9:30	—	9:34	—	9:45	10:05
10:15	10:21	10:24	10:28	10:30	—	10:34	—	10:45	11:05
11:15	11:21	11:24	11:28	11:30	—	11:34	—	11:45	12:05
1:05	**1:11**	**1:14**	**1:18**	**1:20**	**1:25**	**1:30**	—	**1:41**	2:01
2:15	**2:21**	**2:24**	**2:28**	**2:30**	—	**2:34**	—	**2:45**	3:05
3:15	**3:21**	**3:24**	**3:28**	**3:30**	**3:34**	**3:41**	—	**3:52**	4:12
4:15	**4:21**	**4:24**	**4:28**	**4:30**	—	**4:34**	—	**4:45**	5:05
5:15	**5:21**	**5:24**	**5:28**	**5:30**	—	**5:34**	**5:47**	—	6:10
6:15	**6:21**	**6:24**	**6:28**	**6:30**	**6:34**	**6:41**	—	—	7:05

WEEKEND SERVICE

9:20	9:26	9:29	9:33	9:35	—	9:39	9:50	10:00	10:20
11:19	11:25	11:28	11:32	11:34	—	11:38	—	11:49	**12:09**
2:03	**2:09**	**2:12**	**2:16**	**2:18**	—	**2:22**	—	**2:33**	**2:53**
3:52	**3:58**	**4:01**	**4:05**	**4:07**	—	**4:11**	—	**4:22**	**4:42**

Light type = AM
Bold type = PM

❶ Free transfer to VT Route 1
❷ Accept transfer from VT Route 1 with additional fee

❶ Transferencia gratis a VT Ruta 1
❷ Se accepta transferencia de VT Ruta 1 con cargo adicional

AMTRAK

The Hanford AMTRAK station, located approximately 45 miles southwest in Kings County is the closest station to Cutler-Orosi. Amtrak's San Joaquin route links Hanford to Sacramento to the north and Bakersfield to the south. An Amtrak bus can be taken from Bakersfield to Los Angeles Union station where Amtrak's interstate routes can be accessed along with California's Pacific Surfliner route. In Sacramento, additional interstate routes can be accessed along with the capital corridor route linking Sacramento to the Bay Area.

Aviation

The nearest airport is Sequoia Field Airport, which is located approximately five (5) miles to the southwest. The nearest operational general aviation airport is Fresno Yosemite International Airport (FAT), approximately 30 miles northwest of Cutler-Orosi, is the principal passenger and airfreight airport in the central San Joaquin Valley. Visalia Municipal Airport, is approximately 15 miles southwest.

Meadows Field (BFL), Bakersfield's principal commercial airport, is approximately 75 miles south of Cutler-Orosi and offers direct flights to several destinations.

STATE ROUTES

"State Route (SR) 63 is the principle state highway serving the Cutler-Orosi Community. SR 63 primarily exists as an undivided four-lane road without bike lanes throughout Cutler-Orosi Community. On-street parking is currently permitted on the four-lane segments. The posted speed limit is generally 35-40 mph throughout the community (except for school zones with a posted speed of 25 mph). The posted speed limit outside of these communities is generally 55 mph. According to Caltrans' website, the average annual daily traffic (AADT) along SR 63 in the study area was approximately 12,100 south of Avenue 416 and 7,300 south of Avenue 400 in 2017.

SR 201-Avenue 400 (west of SR 63) – currently exists as an undivided two-lane road in the study area. The posted speed limit is generally 55 mph. According to Caltrans' website, the AADT along SR 201 in the study area was approximately 3,000 in 2017."[61]

State Route 63

State Route (SR) 63 runs north and south beginning at SR 137 in the City of Tulare in Tulare County and ends at SR 180, near Squaw Valley in Fresno County. The route is located solely in Caltrans District 6, in Tulare and Fresno Counties. The route runs approximately 38 miles in length. SR 63 intersects with SR 201 before ending at SR 180. Route Segment 10 runs between 0.1 mile north of Avenue 403 to Avenue 422 and is the ultimate transportation corridor concept. Currently there are no projects funded for SR 63.[62]

State Route 201

State Route 201 runs west –east in Fresno and Tulare Counties. The route covers just over 25 miles

[61] Ibid. Page 11.

[62] Transportation Concept Report State Route 63, California Department of Transportation, December 2014

and is located solely in District 6. SR 201 was constructed in 1939 and reconstructed in 1974. There is a break in the route where it meets SR 63 and picks up again at Avenue 384 and continues to head east.[63]

State Route 99

State Route (SR) 99 is a major route between cities within the Central Valley. SR 99 is the primary route between the City of Fresno to the North and the City of Bakersfield to the South. Cutler-Orosi is located approximately 20 miles east of SR 99.

Implementation Strategy

The purpose of this chapter is to prescribe a proposed approach to implement the general plan recommendations contained in chapters I through IV of the Cutler-Orosi Community Plan. There are several components that comprise the Cutler-Orosi Community Plan implementation strategy:

1. Zoning Code Changes
2. Complete Streets
3. Infrastructure

Zoning District Changes

As part of this Implementation Program for the Community Plan for Cutler-Orosi, there are a variety of changes to existing zoning districts. These changes are described below.

Revise Chapter 16 of the Zoning Code

Zoning Code to limit the uses that require a Use Permit. As part the Economic Development Strategy, use permit requirements are streamlined to allow for uses to be developed without discretionary review. That is, proposed uses will not have to undergo an approval process that involves a decision making action by the Tulare County Planning Commission or Board of Supervisors. Project design features and Administrative approval will serve as the mechanism to allow (regulate) land uses, activities, densities, and other conditions typically applied through the special use permit process.

Elimination of SR Combining Zone

The SR combining zone requires site plan review for most uses in the combining zone. This alternative would eliminate the SR combining zone designation in the community of Cutler-Orosi. The elimination of the SR combining zone would only affect commercial zoning districts, C-2-SR, C-3-SR, and P-O-SR. This zone change would only affect approximately thirty (30) parcels in the C-2-SR, four (4) parcels in the C-3-SR, and one (1) parcel in the P-O-SR within Cutler-Orosi and as such, elimination of this combining zone would not have a noticeable effect on Cutler-Orosi.

Mixed Use Overlay District

This alternative involves the creation of a Mixed Use Zoning Designation for the Community of

[63] Transportation Concept Report State Route 201, California Department of Transportation, December 2017

Cutler-Orosi **(see Attachments A-2 and A-3)**.

Zoning Map Update

The current Zoning Map for Cutler-Orosi will be amended to be compatible with the Land Use Map outlined in the General Plan. There are a couple of zoning district changes that are proposed to allow the General Plan and Zoning Ordinance to be in conformity with each other Cutler-Orosi Proposed Zoning. In addition, there are a number parcels that need to re-zoned to adhere to the airport land use plan.

Attachments

A-1 Use Permit Requirement Changes (Zone Change Text)
A-2 Mixed Use Overlay District (Zone Change Text)
A-3 Development Standards (Mixed Use Zoning Districts)
A-4 General Plan Land Use and Zoning Consistency Matrix
A-5 Funding Sources
A-6 Complete Streets
A-7 Public Outreach

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Attachment A-1 Use Permit Requirement Changes

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A-1 Use Permit Requirement Changes (Zone Change Text)

H. Permitted Uses

All of the following, and all structures and accessory uses directly related thereto in this section are entitled without a Special Use Permit (Conditional Use Permit). The following is allowed only in the various zones indicated below and within a community plan that adopted development standards for such entitled use. The proposed use must adhere to the adopted development standards of the community. The proposed use must also qualify for an exemption under the California Environmental Quality Act as determined by the Permit Center. The Permit Center will review the project for General Plan Policy, Community Plan Policy and development standard consistency and determine which environmental document is appropriate. Projects where the Permit Center is unable to make an immediate determination will be required to go through the Project Review Committee (PRC).

Uses that have an environmental effect on adjacent properties or necessitate mitigation measures through the California Environmental Quality Act will be required to apply for a PRC and a traditional use permit and legislative process through the County. These uses may have environmental or land use issues that may not be compatible with adjacent uses. These impacts may include but are not limited to; hours of operation (nighttime), noise (i.e. power tools such as impact drivers, or loudspeaker, etc) air quality (idle running vehicles), traffic (number of vehicles) and odor. The Permit Center process is to determine the whether the use is by right or must go through the traditional use permit process. The following uses and zones shall be considered:

Permitted Uses		
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Animal hospital, clinic, and veterinarian office wherein only small/domestic animals (i.e. dogs, cats, etc.) are treated. Structure < 10,000 sq. ft.	C-1, C-2, C-3, M-1, M-2	
Antique and art store. Structure < 10,000 sq. ft.	C-2, C-3, M-1, M-2, R-3	C-2, C-3, M-1
Antique store containing less than one thousand (1,000) square feet of floor area	C-1, C-2, C-3, M-1, R-2, R-3	C-1, C-2, C-3, M-1
Apartment Hotel Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, R-3	O
Apparel stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-3	C-1, C-2, C-3, M-1
Arcades, including video. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, R-3	C-2, C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone

Assemblage of people for educational or entertainment purposes. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, M-2	
Assembly of electric appliances such as lighting fixtures, irons, fans, toasters and electric toys, refrigerators, washing machines, dryers, dishwashers and similar home appliances. Structure < 10,000 sq. ft.	C-2, C-3, M-1, M-2	M-1
Assembly of small electrical equipment such as home and television receivers. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, R-3	M-1
Assembly of typewriters, business machines, computers, and similar mechanical equipment. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, M-2, R-3	M-1
Automated car wash (coin operated only). Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, M-2, R-3, AP	C-2, C-3, M-1
Automobile parking lots, public parking areas or storage garages. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, M-2, R-3, AP	
Automobile supply stores.	O, CO, C-1, C-2, C-3, M-1, R-3	C-2, C-3, M-1
Automobile washing, including the use of mechanical conveyors, blowers and steam cleaning.	C-2, C-3, M-1, M-2	C-3, M-1
Bakery [employing not more than five (5) persons on premises].	O, CO, C-1, C-2, C-3, M-1, R-3	C-1, C-2, C-3, M-1
Bakery goods store.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Banks and financial institutions.	C-1, C-2, C-3, M-1, R-3	C-1, C-2, C-3, M-1
Barber shop or beauty parlor.	C-1, C-2, C-3, M-1, R-3	C-1, C-2, C-3, M-1
Bed and Breakfast Home with three or more guests rooms (Up to 5). Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-3, R-2	R-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Bicycle shops. Structure.	CO, C-1, C-2, C-3, M-1, R-3	C-2, C-3, M-1
Billiard or Pool hall Structure	C-2, C-3, M-1	C-2, C-3, M-1
Bird store or pet shop.	O, CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Blueprinting and Photostatting shop.	CO, C-1, C-2, C-3, M-1, AP	C-2, C-3, M-1
Boat sales and service. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1	C-3, M-1
Bookbinding. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, R-3	C-3, M-1

Book or stationary store. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1, R-3	C-1, C-2, C-3, M-1
Business and professional schools and colleges. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Business, professional and trade schools and colleges. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Catering Shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Ceramic shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Christmas tree sales lots as a temporary use.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Church. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Clothes cleaning and pressing establishment. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Clothing and costume rental. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Confectionery store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Conservatory of Music. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Contractor's Storage Yards.	CO, C-1, C-2, C-3, M-1, AP	
Dairy products store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Department store Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Digesters	M-1	
Drug store or pharmacy. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Dry goods or notions store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Electric appliance stores and repairs Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Expansion, Alteration or Replacement of non-conforming buildings and uses. Structure < 10,000 sq. ft.	CO, C-1, C-2, M-1, R-1, R-2, R-3, R-A	
Family Day Care Home, Large (Up to CA State maximum).	CO, C-1, C-2, R-1, R-2, R-3, RA	
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Family Day Care Home, small.	CO, C-1, C-2, R-1, R-2, R-3, RA	R-1, R-2 R-3, C-1, C-2, C-3, M-1
Feed and seed stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, AP	C-3, M-1
Fire Station.	CO, C-1, C-2, C-3, M-1, AP	
Firewood sales yard.	CO, C-1, C-2, C-3, M-1	C-3, M-1

Florist shop. Structure < 10,000 sq. ft.	CO, C-1, C-2, M-1, R-1, R-2, R-3, RA	C-1, C-2, C-3, M-1
Furniture store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Furniture warehouses for storing personal household goods, provided ground floor front is devoted to stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Gasoline filling station. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Gift, novelty or souvenir. Structure < 10,000 sq. ft.	CO, C-1, C-2, M-1, R-2, R-3, RA	C-2, C-3, M-1
Glass shop, retail, excluding major service activities. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-2, C-3, M-1
Grocery store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Grocery store, fruit store or supermarket. Structure < 10,000 sq. ft.	C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Gunsmith shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Hobby and art supply store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Hospital, sanitarium and nursing home. Structure < 10,000 sq. ft.	C-1, C-2, C-3, M-1, PO	
Household and office equipment and machinery repair shops. Structure < 10,000 sq. ft.	C-2, C-3, M-1, PO	C-3, M-1
Household appliance stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Ice storage house of not more than 5-ton storage capacity.	CO, C-1, C-2, C-3, M-1, AP	
Incidental manufacturing, processing and treatment of products. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-2, C-3, M-1
Interior decorating store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Jail or correctional (public facilities only).	C-2, C-3, M-1, M-2	
Jewelry store, including clock and watch repair. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Laundries. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Laundry, coin operated machines only. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Leather goods and luggage stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Linen supply services. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Liquor store. Structure < 10,000 sq. ft. Not within 300’ of residential/School Site.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Locksmiths. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Massage or physiotherapy establishment Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1

Meat market or delicatessen store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Medical and orthopedic appliance stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, PO	C-2, C-3, M-1
Medical laboratory. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, PO	C-2, C-3, M-1
Memorial building, theatre, auditorium. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-3	
Micro-brewery. Structure < 10,000 sq. ft. *Allowed in C-1 and C-2 in conjunction with a restaurant.	M-1, M-2, C-3,*C-2, *C-1	M-2
Mini-warehouses. Structure < 10,000 sq. ft.	C-2, C-3, M-1, AP	C-3, M-1
Mobilehome for use by caretaker or night watchman.	CO, C-1, C-2, C-3, M-1	O, C-2, C-3, M-1
Motorcycle sales and service. Structure < 10,000 sq. ft.	C-2, C-3	C-3, M-1
Musical instrument repair shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Name plates. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-3	R-3, C-1,C-2, C-3, M-1
Nursery school. Structure < 10,000 sq. ft.	CO, C-1, C-2, M-1, R-1, R-2, RA, R-3, R-A	
Office, business or professional. Structure < 10,000 sq. ft.	CO, C-1, C-2, M-1, R-1, R-2, R-3, PO	C-1, C-2, C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Opticians and optometrists shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, PO	C-2, C-3, M-1
Paint and wallpaper stores. Structure < 10,000 sq. ft.	C-1, C-2, C-3, M-1	C-2, C-3, M-1
Pet shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Photo processing pick-up and delivery outlets. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Photographic and blueprint processing and printing. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Photographic developing and printing. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Photographic supply stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Picture framing shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Plumbing fixtures for retail sales. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Plumbing shops. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Police station.	O, CO, C-1, C-2, C-3, M-1, M-2	
Post Office.	CO, C-1, C-2, C-3, M-	O, C-1, C-2, C-3,

	1, R-1, R-2, R-3, PO	M-1
Pressing establishments. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Printing, lithography, engraving. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Private club, fraternity, sorority and lodge. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Private greenhouses and horticultural collections. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-1, R-2, R-3, R-A	R-1, R-2 R-3, C-1, C-2, C-3, M-1
Public library.	CO, C-1, C-2, C-3, M-1, R-1, R-2, R-3, R-A	R-3, C-1, C-2, C-3, M-1
Public Park or playground.	O, MR, CO, C-1, C-2, C-3, M-1, M-2 R-1, R-2, R-3, R-A, AP	
Public utility structure.	CO, C-1, C-2, C-3, M-1, MR, RO, R-1, R-2, R-3, R-A, PO, O, AP	
Radio and television broadcasting studios. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Radio and television repair shops. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Radio, microwave and television towers (Over 75 feet or within 2 miles of an airport).	C-2, C-3, M-1, M-2	
Real Estate Offices. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-1, R-2, R-3, R-A	
Recreation center. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Repairing and altering of wearing apparel. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Resort Structure. < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Restaurant. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Restaurant, tearoom or cafe. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1, R-1, R-2, R-3, R-A	C-1, C-2, C-3, M-1
Retail office equipment sales. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Retail sales of sporting goods, boats, boat motors, boat trailers, trailer coaches and their repair, rental and storage. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1	
Retail stores and offices incidental to and located on the site of a hotel, motel, resort, restaurant or guest ranch. Structure < 10,000 sq. ft.	O, CO, C-1, C-2, C-3, M-1	
Rug and carpet cleaning and dyeing. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Satellite antenna sales. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1

Satellite television antennas.	CO, C-1, C-2, C-3, M-1	
School, private.	CO, C-1, C-2, C-3, M-1, PO	
School, public.	CO, C-1, C-2, C-3, M-1, PO	
Scientific instrument stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Secondhand stores, pawn shops and thrift shops. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Shoe repair shop. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Shoe store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Sign painting shops. Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-3, M-1
Small appliance sales and service. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Soda fountains. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Sporting goods store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Stamp and coin stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Storage of petroleum products for use on the premises.	CO, C-1, C-2, C-3, M-1	
Studios (except motion picture). Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Tinsmith Structure < 10,000 sq. ft.	C-2, C-3, M-1	C-2, C-3, M-1
Tire sales (no retreading or recapping). Structure < 10,000 sq. ft.	C-2, C-3	C-2, C-3, M-1
Tobacco and cigar stores. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Tourist Court. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	
Toy store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Zoning District Uses	New Entitled Zone	Prior Entitled Zone
Trailer and recreation vehicle sales, service and rentals. Structure < 10,000 sq. ft.	C-2, C-3, M-1, M-2, AP	C-3, M-1
Travel agencies. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Variety store. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Video machine and tape sales/rental. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-1, C-2, C-3, M-1
Warehouses except for the storage of fuel or flammable liquids and explosives. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-3, M-1
Watch and clock repair shop. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1
Wedding chapel. Structure < 10,000 sq. ft.	CO, C-1, C-2, C-3, M-1	C-2, C-3, M-1

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Attachment A-2 Mixed Use Overlay Districts

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A-2 Mixed Use Overlay District (Zone Change Text)

The following regulations shall apply in the community of Cutler-Orosi, unless otherwise provided in this Ordinance.

PURPOSE **A.** The purpose of this zone is to allow for mixed uses. Allowing a mix of uses promotes flexibility in the types of entitlements that can be issued. Economic Development can be pursued with a wide variety of development potential. In addition, mixed use can allow for decreased vehicles miles traveled if residential uses are mixed with uses for employment.

APPLICATION **B.** This overlay zone only applies to the community of Cutler-Orosi.

USE **C.** No building or land shall be used and no building shall be hereafter erected or structurally altered, except for one or more of the following uses allowed in this this overlay zone are outlined in the community plan for Cutler-Orosi.

Within the Mixed Use Zoning District, all uses outlined in the M-1, C-3, C-2, C-1, R-1, R-2 and R-3 uses are allowed. Uses and activities that are found by the Planning Director to be similar to and compatible with those specific zoning districts are also allowed. In addition, use and activities determined to be compatible by the Planning Commission and the Board of Supervisors with the above mentioned zoning districts are also allowed.

All conditional uses allowed in these zoning districts shall also be allowed by right with exception of the following combination of uses: All uses shall not be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood, or to the general welfare of the county. All uses shall limit impacts related to smoke,

Uses/Combination of Uses reviewed by Planning Commission
Auto wrecking and Residential
Battery Manufacture and Residential or Commercial
Biomass Fuel Production and Residential
Flammable Liquids over 10,000 gallons
Hazardous Waste Facility
Planning Mills and Residential or Commercial
Sand blasting
Slaughterhouse and Residential
Solid Waste Recycling and Residential
Super service stations and Residential
Airport
Heliport

fumes, dust, gas, noise, odor, vibrations and other hazards to be considered an allowed use without the need for a special use permit. All allowed uses are subject to the determination of appropriateness by the Director of Planning.

The Director of Planning has the option of deferring any land use application allowed in this district to the Planning Commission for review and decision.

DEVELOPMENT

1. Height: No building or structure hereafter erected or structurally altered shall exceed six (6) stories or seventy-five (75) feet to uppermost part of roof.

2. Front Yard: 0 Feet

3. Side Yard: Where a lot abuts upon the side of a lot in any "R" Zone (R-A, R-O, R-1, R-2 and R-3), there shall be a side yard of not less than five (5) feet. Where a reversed corner lot rears upon a lot in any "R" Zone, the side yard on the street side of the reversed corner lot shall be not less than fifty (50) percent of the front yard required on the lots in the rear of such corner lot. In all other cases, a side yard for a commercial building shall not be required.

4. Rear Yard: Where a lot abuts upon the rear of a lot in any "R" Zone (R-A, R-O, R-1, R-2 and R-3), there shall be a rear yard of not less than fifteen (15) feet. In all other cases, a rear yard for a commercial building shall not be required.

5. Lot Area: The minimum lot area shall be ten thousand (10,000) square feet; provided, however, that where a lot has less area than herein required and was of record at the time this paragraph became effective, said lot may be occupied by not more than one (1) main building subject to the provisions of this Section.

6. Floor Area Ratio: The maximum Floor Area Ratio is 2. The Floor Area Ratio is the amount of square feet of all structure allowed on a parcel based on parcel size.

7. Distance between structures: The minimum distance between structures is 10 feet.

8. Parking: Off-street parking and loading shall be required in conformance with Section 15.

9. Fences, Walls, and Screening: Where the side or rear lot line of a site adjoins or is located across an alley from any “R” Zone (R-A, R-O, R-1, R-2, and R-3), there shall be a solid wall, fence or equivalent landscaping screening at least six (6) feet in height located along the common lot line, except in the required front or side yard. Open storage of materials and equipment shall be permitted only within an area surrounded and screened by a solid wall or fence or compact evergreen hedge (with solid gates where necessary), not less than six (6) feet in height, provided that no materials shall be stored to a height greater than that of the wall, fence, or hedge. Fulfillment of the requirement of this paragraph shall not be required

for buildings and uses which were established in accordance with all applicable buildings and zoning regulations and which were existing in a commercial or manufacturing zone on the effective date of this paragraph, until such time as a permit or other grant of approval for expansion, alteration or development of property is approved by Tulare County.

All other Development Standards are outlined in the Community Plan for Cutler-Orosi. Conformance to development standards is required for all development; however, the Planning Director, Planning Commission, or Board of Supervisors may provide exemptions to particular development standards when deemed appropriate.

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Attachment A-3 Development Standards (Mixed Use Zoning Districts)

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A-3 Development Standards (Mixed Use Zoning District)

To promote Economic Development within the Cutler-Orosi Urban Development Boundary, a Mixed Use Overlay zoning district is being established to allow for flexibility in the allowed uses within Cutler-Orosi. In addition, the use permit restriction is updated to allow for ministerial approval [by the Planning Director]. Development standards are established to ensure high quality development within this mixed use overlay district. To promote Economic Development within the Cutler-Orosi Urban Development Boundary, a Mixed Use Overlay zoning district is being established to allow for flexibility in the allowed uses within Cutler-Orosi. In addition, the use permit restriction is updated to allow for ministerial approval [by the Planning Director]. Development standards are established to ensure high quality development within this mixed use overlay district.

ARCHITECTURE

A-1 Entries to buildings should be individualized and clearly identifiable.

A-2 Retail spaces should be accessed directly from the sidewalk, rather than through lobbies or other internal spaces.

A-3 Entrances to upper story uses should not be as prominent as the primary entrances to first story uses.

A-4 The height of first floor commercial should have a minimum ceiling height of 12 feet.

A-5 Architecturally distinguish the ground floor from the upper façade, to form a visual base for the building. Create an intimate scale for the pedestrian environment.

A-6 Each building should have a defined base, body, and cap segment

A-7 Blank walls on ground floor facades adjacent to public sidewalks, public right-of-ways, and public spaces are prohibited.

A-8 Ground floor window openings should range between fifty (50) to eighty (80) percent of the ground floor façade adjacent to sidewalks and private and public plazas, patios, and courtyards. These window openings should consist of transparent "storefront" windows. Second story windows should not exceed fifty (50) percent of the total exterior wall surface.

A-9 Three-dimensional cornice lines, parapet walls, and/or overhanging eaves should be used to enhance the architectural character of the building.

A-10 Wall surfaces should not exceed 250 square feet without including some form of articulation. Acceptable forms of articulation include use of windows, varied reveal patterns, change in material, texture, color, or detail; and a change in wall plane location or direction.

A-11 Openings in the façade should be accentuated with paint, tile, shutters, awnings, planters, and/or other appropriate architectural features in order to create varied shadows and a rich visual texture.

A-12 Articulation and detailing of the

exterior walls at the ground level, should be integrated with landscape features (trees, plants, walls, trellises, and unique land forms) to ensure an appropriate transition from ground to wall plane.

A-13 An equal level of architectural detail and landscaping should be incorporated into all sides of freestanding buildings, because they are generally visible from all sides.

A-14 Architectural details should be fully integrated into the design of the building to avoid the appearance of afterthought elements or elements that are "tacked on" to a building.

A-15 Finish materials that give a feeling of permanence and quality should be used at ground level facades.

A-16 A consistent use of window style, size, trims, and accents should be used to ensure a consistent character along the building façade.

A-17 Exposed structural elements (beams, trusses, frames, rafters, etc.) are acceptable when appropriately designed to complement the over design of the façade.

A-18 Tilt-up buildings should incorporate decorative trim, recessed/projecting panels, recessed windows/doors, accent materials, and varied roof height to increase visual interest.

A-19 New buildings located at the corner of the block may be more massive in scale than adjacent buildings to better define the street intersection.

A-20 Corner buildings should have a strong relationship to the corner of the intersection by incorporating a unique architectural element or detail at the corner; such as a tower or primary building entrance.

A-21 Corner buildings should present equally important facades of similar appearance on both streets.

A-22 Articulate side and rear facades in a manner compatible with the design of the front façade. Avoid large blank wall surfaces on side and rear facades, which are visible from public areas. In these locations, display windows, store entrances, and upper windows are encouraged. When this is not feasible, consider the use of ornament, murals, or landscaping along large blank walls.

A-23 Remove alterations whose design and/or materials are not consistent with the overall character of the building.

A-24 Where off-street parking or an alley is provided behind a building, a secondary entrance to both first floor and upper floor uses should be provided at the rear of the building.

A-25 Locate and design required vents and access doors to minimize their visibility from public spaces.

A-26 Use high quality detailing for new buildings and replacement elements. For example, new or replacement windows should have sash and frame thicknesses and window depths, which are similar to those of original or historic windows. Such level of detailing provides an interplay between light and shadow, which adds interest and visual depth to the façade.

A-27 Loading docks, storage areas, and service facilities should be located at the rear of the building and screened from the street as necessary.

A-28 Conceal all electrical boxes and conduits from view, and position light sources to prevent glare for pedestrians and vehicles.

ROOFS AND AWNINGS

RA-1 Awnings should be compatible with other awnings nearby, particularly those on the same building, when these awnings complement the architectural character of the building.

RA-2 Canopies and awnings should be compatible with the style and character of the structure on which they are located.

RA-3 Use matte canvas fabric for awnings; not vinyl, fiberglass, plastic, wood or other unsuitable materials. Glass and metal awnings may be appropriate for some buildings, but must be consistent with the architectural style of the building.

RA-4 Include architectural features such as awnings, canopies, and recessed entries that can protect pedestrians from inclement weather. Design these features as integral parts of the building.

RA-5 Awnings and canopies should not hang below the top of the first floor storefront window. In addition, awnings and canopies should be at least ten (10) feet above the sidewalk.

RA-6 Canopies and awnings should not project more than seven (7) feet from the surface of the building.

RA-7 Awnings and canopies that project into the public right-of-way should not impede pedestrian or vehicular movement.

RA-8 Roof forms, lines, masses, and materials should be continuous and consistent with the overall style, character, scale, and balance of the building.

RA-9 Roof overhangs and exposed structural elements should be designed to be consistent with the overall style and character of the building.

RA-10 Roof mounted HVAC equipment, ducts, vents, and other equipment should be screened from public view.

RA-11 Mansard roofs are prohibited.

RA-12 All flat roofs should have 90% of the roof area covered by solar panels. All sloped roofs should have 50% of the roof area covered by solar panels. Roofs should be painted or colored with a bright white (or similar color) with a reflective glossy finish.

SITE PLANNING

SP-1 Place entrances to storefronts and other ground floor uses so that they are accessible directly from the public sidewalk, not internal lobbies.

SP-2 On corner sites, a prominent streetscape presence should be established and visual interest should be created by either locating buildings near the intersection to enliven the streetscape or using landscaping to frame the intersection. Parking areas immediately adjacent to intersections are discouraged.

SP-3 Structures and site improvements should be located and designed to avoid conflict with adjacent uses.

SP-4 Gates to parking areas should be designed with materials and color that are

compatible with the site.

SP-5 Multi-story buildings that overlook private or common area open space of adjacent residences should be designed to protect privacy of these spaces.

SP-6 Gates to parking areas should be located to prevent vehicle stacking or queuing on the street.

SP-7 Primary site and building entry points are strongly encouraged to generate visual interest with special design features such as decorative or textured paving, flowering accents, special lighting, monuments, walls, shrubs, water features, and the use of sizeable specimen trees.

SP-8 To the extent feasible and practicable, parcels should share access driveways to minimize curb cuts and traffic congestion.

SP-9 Cul-de-sacs are inappropriate except when a freeway, railroad, or canal prevents connectivity.

SP-10 Block lengths should be short, averaging 200 to 300 feet. Maximum block length is be 500 feet.

LANDSCAPING

LA-1 Projects should provide, and maintain, landscaped buffers between commercial uses and low-density residential uses, between industrial and residential uses, and between commercial and industrial uses. Plant material will be placed in a manner to suggest natural growth as opposed to a rigid barrier.

LA-2 A predominance of deciduous tree species is encouraged to shade western, southern, and southwestern exposures.

LA-3 The parking lot should not be the dominant visual element of the site as viewed from the street. Locate or place parking lots at the side and rear of buildings or use parking lot screening to soften their appearance. Screen parking lots: Utilize a hedge (recommended height of 36 inches) with a rolling berm to screen parking at the street periphery
(Minimum shrub container size should be 5 gallons.)

LA-4 Project sites should be designed so that areas used for outdoor storage, and other potentially unsightly areas are screened from public view. All service yards and outdoor storage areas should be enclosed or screened from view.

LA-5 Loading areas, access and circulation driveways, trash, and storage areas, and rooftop equipment should be adequately screened from the street and adjacent properties, as deemed necessary. To the fullest extent possible, loading areas and vehicle access doors should not be visible from public streets.

LA-6 Loading driveways should not back onto streets or encroach into landscaped setback areas.

LA-7 Loading doors should be integrated into building elevations and given the same architectural treatment where feasible.

LA-8 Utility equipment such as electric and gas meters, electrical panels, and junction boxes should be screened from view or incorporated into the architecture of the building.

LA-9 Utility devices, such as transformers and backflow preventers, should not dominate the front landscape area.

LA-10 All utility lines from the service drop to the site should be located underground.

LA-11 When security fencing is required, it should be a combination of solid walls with pillars and offsets, or short solid wall segments and segments with metal fencing. Chain-link fencing is strongly discouraged when facing public view and should only be used as interior fencing.

LA-12 Retaining walls at retention basins should utilize a stepped or terraced motif as a visual tool to maintain appropriate human scale.

LA-13 Retention basins visible to public view and common open spaces should be contoured and landscaped in a creative manner to minimize a harsh utilitarian appearance. When feasible, it is recommended to beneficially use the run-off storm water as supplemental watering for the landscape plants.

LA-14 Parking lot run-off should be routed through turf or other landscaping.

LA-15 Parking lots located adjacent to the sidewalks or rights-of-way should be screened to a height of thirty-six (36) inches above the grade with landscaping and/or low high quality fencing.

REFUSE AND STORAGE AREAS

R-1 Trash storage must be enclosed within or adjacent to the main structure or located within separate freestanding enclosures.

R-2 Trash enclosures should be unobtrusive and conveniently accessible for trash collection but should not impede circulation during loading operations.

R-3 Trash enclosures should be located away from residential uses to minimize nuisance to adjacent properties.

R-4 Trash and storage enclosures should be architecturally compatible with the project design. Landscaping should be incorporated into the design of trash enclosures to screen them and deter graffiti.

LIGHTING

LI-1 Provide lighting at building entrances and for security at ground level.

LI-2 Lights should be shielded and point down toward the ground.

LI-3 Parking lot should have uniformly spaced night lighting.

LI-4 Well-lit sidewalks and/or pedestrian walkways should be located to provide safe access from the parking lot to the street sidewalk.

LI-5 Exterior architectural lighting should fully compliment a building's design and character. Light fixtures should work in conjunction (size, scale, and color) with the building's wall, roof.

LI-6 Street lighting features should be "pedestrian scale" at twelve (12) to eighteen (18) feet in height above the curb.

WALLS AND FENCES

WF-1 Wall/fence design should complement the project's architecture. Landscaping should

be used to soften the appearance of wall surfaces.

WF-2 Walls and fences within front and exterior side yards of commercial sites should be avoided.

WF-3 Unless walls are required for screening or security purposes they should be avoided.

WF-4 Security fencing should incorporate solid pilasters, or short solid wall segments and view fencing.

WF-5 Front yard fences should not abut the sidewalk. The fence should be set back from the sidewalk at least 2 to 3 feet to allow room for landscape materials to soften the fence and to ensure pedestrian comfort.

WF-6 Walls and fences should be designed in such a manner as to create an attractive appearance to the street and to complement the architecture of the industrial park.

WF-7 Gates should be provided in walls or fences where necessary to allow emergency access.

WF-8 High perimeter walls and walls topped with barbed wire, razor wire, or broken glass are strongly discouraged.

WF-9 Inordinately long walls or fences should be broken up by landscaping, pilasters, offsets in the alignment of the wall or fence, and/or changes in materials and colors.

WF-10 Chain link fences should not be visible from streets.

WF-11 Long expanses of fence or wall surfaces should be offset and architecturally designed to prevent monotony. Landscape pockets (12-feet wide by 3- feet deep) should be provided at 70-foot minimum intervals along the wall.

STREETSCAPE

ST-1 A consistent pavement material of varied texture and color should be applied to all crosswalks to clearly define pedestrian crossings, to slow down traffic.

ST-2 Sidewalks widths, excluding curbs, should be a minimum of five (5) feet.

ST-3 Curb and gutters should be constructed with all new development.

ST-4 A planting strip, or tree lawn, 3 to 5 feet wide should be located between the sidewalk and the curb of the street. Existing tree lawns should be preserved.

ST-5 New street trees should be planted on the curb edge of the sidewalk in front of all new development projects.

SIGNAGE

SI-1 Sign letter and materials should be professionally designed and fabricated.

SI-2 Each storefront with a ground floor entrance should be allowed two signs that should be attached to the building.

SI-3 All electrical conduits should be concealed from public view.

SI-4 For commercial uses, the primary wall sign should be in the space above a storefront and visibly oriented towards the street.

SI-5 For commercial uses, a secondary sign should be smaller than the primary sign and be oriented towards passing pedestrians. It should extend out perpendicular to the building façade and be mounted or hung from the wall beneath an awning or above a first

floor window. The bottom of the wall-mounted sign should be located at least eight (8) feet above the sidewalk. The outer face of the sign should not extend more than four (4) feet from the edge of the building surface, and the maximum area of the sign should have no more than six (6) square feet.

SI-6 Signs should be designed to be compatible with building design in terms of relative scale, overall size, materials, and colors. No sign should dominate the façade. Signage elements should incorporate materials colors, and shapes that appropriately reflect and compliment the building's architecture.

SI-7 Large signs that dominate a building façade or the streetscape should not be permitted.

SI-8 Signage should be constructed of high quality, low maintenance, and long lasting materials. Except for banners, flags, temporary signs, and window signs, all signs should be constructed of permanent materials and should be permanently attached to the ground, a building or another structure by direct attachment to a rigid wall, frame, or structure.

SI-9 No more than twenty (20) percent of window area should be obstructed by signs, posters, advertisements, painted signs, and/or merchandise, and the top one half of the window should be permanently clear and free of obstructions. Awning signage should be of a replaceable-type to accommodate tenant turnover.

SI-10 Wall, canopy, under-canopy, and marquee signs should not exceed three-fourths (3/4) square foot of aggregated display area per lineal foot of frontage.

SI-11 Awning sign should be mounted on the hanging border of the awning and should not protrude beyond the awning surface.

SI-12 Wall signs or advertisements should not project more than twelve (12) inches from the wall face to which they are mounted, should not project beyond building eaves, and should be mounted flat throughout their length and height.

SI-13 Signs for individual tenants within a multiple-tenant, such as offices located above the ground floor, should be grouped together and appropriately scaled to a pedestrian-oriented retail environment.

SI-14 Fin signs or under marquee sign are permitted provided that they are installed with a minimum of eight (8) feet clearance from the lowest point on the sign and support to the top of the walking surface below it.

SI-15 Awning signs and face-mounted signs are permitted provided that the sign should have no more than one line of text and that maximum text height is twelve (12) inches.

SI-16 No signs should be erected in any manner in which the sign, in whole or in part, would create a hazardous condition to pedestrian or automobile traffic alike.

SI-17 Additional business signs should be permitted on windows and on the vertical face of awning valances provided that the signs are permanent in nature and of high quality.

SI-18 The following signs are strictly prohibited:

- Roof signs, signs located above the roof or parapet lines.
- Permanent banner signs.
- Posters.
- Painted window advertisements.

- Billboards
- Large auto-oriented pole-mounted or "lollipop signs."
- Moving signs and flashing signs.

SI-19 Signs advertising an activity, business product, or service no longer conducted on the premises, and/or signs frames, structural members, or supporting poles remaining unused for a period of six (6) months should be removed from the site or building by the property owner.

SI-20 Address markers should be easily identifiable and readable from the street.

SI-21 Freestanding, ground-mounted and monument signs should be not less than one (1) foot behind a property line or designated right-of-way for vehicular and pedestrian traffic, but in no case should be more than ten (10) feet behind a sidewalk and ten (10) feet from any vehicular entrance or driveway. These signs should not interfere with the safety of vehicular traffic entering or exiting the premises.

SI-22 The maximum height of monument signs should be five (5) feet above the top of concrete curb.

SI-23 One freestanding or monument sign with a maximum of thirty-two (32) square feet of display area should be allowed on each street frontage of more than fifty (50) feet. Where two (2) or more freestanding or monument signs are allowed on a single street frontage, one freestanding or monument sign with a maximum of fifty (50) square feet of display area may be used in lieu of several signs on the same frontage.

SI-24 All gateway signs should have a consistent character and style.

SI-25 A hierarchy of gateways signs should be established to differentiate between major and minor gateway entrances.

SI-26 Major gateway signs should be designed as visually prominent towers, monuments, or street spanning arches.

SI-27 Minor gateway signs should be visible to automobile traffic, but also be low enough to be visible to pedestrian traffic.

SERVICE STATIONS AND CAR WASHES

SS-1 Service and carwash bays should not face residential properties or the public street. The visibility of service bays and carwash opening should be minimized.

SS-2 Gas pump canopies should be ancillary to the main building structure. The retail market/office building segment of the facility should be oriented along the street frontage, whenever possible.

SS-3 All structures on the site (including kiosks, carwash buildings, gas pump columns, etc.) should be architecturally consistent and related to an overall architectural theme.

SS-4 Canopy light fixtures should be recessed into the canopy.

SS-5 Outdoor equipment, such as vent risers and clean air separators, should be screened either with an enclosure or if site configuration topography permits, away from street view, screened with landscaping or located at a grade differential.

SS-6 Site-specific architectural design contextual to surroundings is strongly encouraged. Designs based solely on corporate or franchise models are strongly discouraged.

AUTO REPAIR SERVICES

AR-1 Building design should be stylistically consistent, and compatible with surrounding buildings through use off similar scale, materials, colors, and/or detailing.

AR-2 Building materials should have the appearance of substance and permanency; lightweight metal or other temporary appearing structures are discouraged.

AR-3 Vehicle drop-off areas should be provided to prevent vehicle overflow to adjacent streets.

CONTRACTOR, BUILDING SUPPLY, OR LANDSCAPING YARDS

BS-1 The main office or building should be located along the street frontage to screen outdoor sales and minimize the visibility of storage of materials and vehicles.

BS-2 Customer parking should be provided close to the building and not interspersed in the yard.

BS-3 All outdoor contractor vehicle storage areas should be enclosed with a screen of sufficient height and constructed with durable and high-quality materials that are compatible with the building and site.

CONSUMER STORAGE FACILITIES

SF-1 The administrative office should be located in a building or building element that is human scale and located in proximity to the street.

SF-2 Parking for visitors should be located near the administrative office, outside of any gated portion of the facility.

SF-3 A storage facility should be consistent with its surrounding area in scale and appearance, through the use of building size transitions, architecture, and landscaping.

SF-4 Loading doors for individual storage units should not face outward toward streets.

SF-5 In order to break up the mass of larger buildings which containing storage units, provide horizontal and vertical articulation through the use of building offsets, windows, and variations in colors and materials.

SF-6 Any area intended for the storage of automobiles and recreational vehicles should be located towards the rear of the site or screened with an enclosure of adequate height

SPECIAL CONDITIONS

SC-1 The project should emit no smoke or should reduce the amount of smoke from an existing use.

SC-2 The project should emit no fumes or should reduce the amount of fumes from an existing use.

SC-3 The project should implement dust control measures sufficient to minimize or prevent dust emissions. Measures should be consistent with, or more effective than, those required by the Valley Air District.

SC-4 The project should emit no odors or should reduce the amount of odors from an existing use.

SC-5 The project should not create noticeable vibrations.

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Attachment A-4General Plan Land Use and Zoning Consistency Matrix

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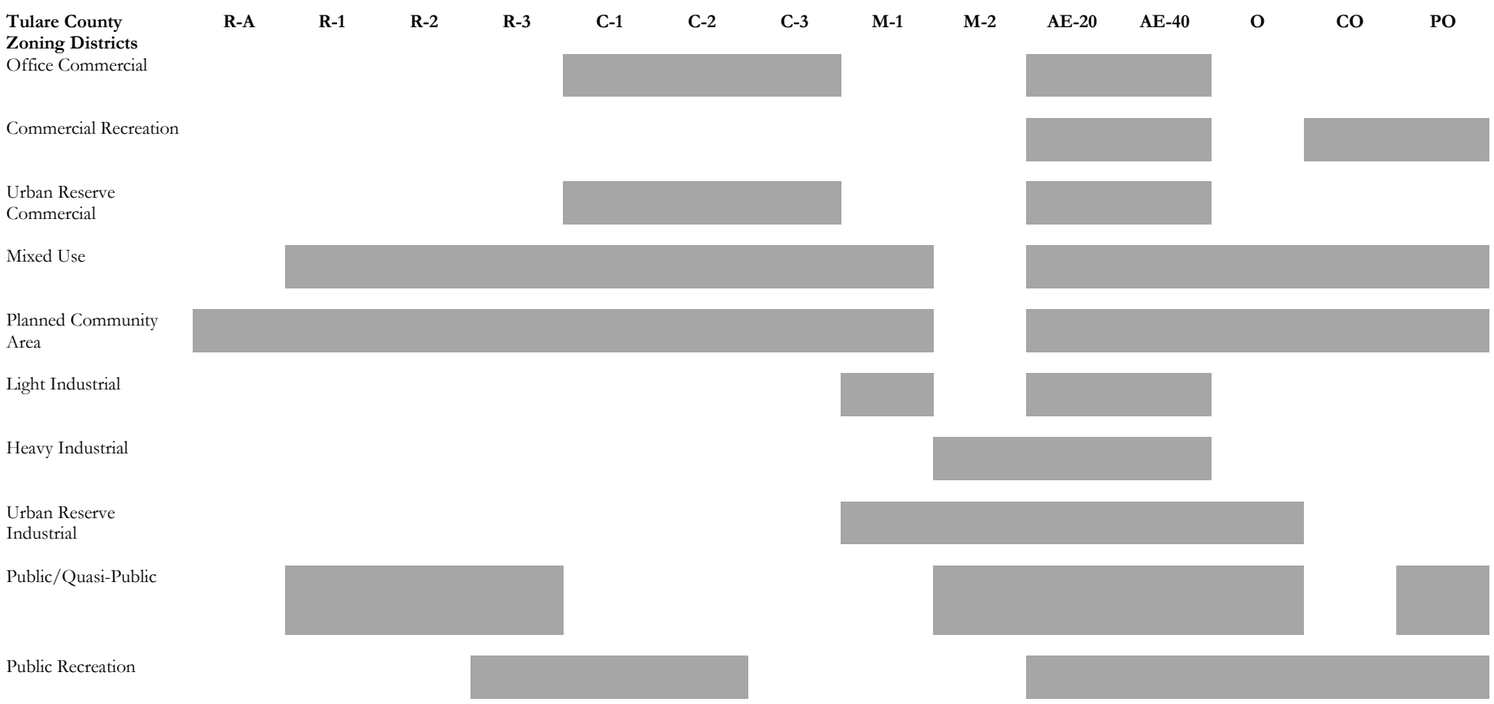
Attachment A-4 General Plan Land Use and Zoning Consistency Matrix

Tulare County Zoning Districts General Plan Land Use Designations	**R-A**	**R-1**	**R-2**	**R-3**	**C-1**	**C-2**	**C-3**	**M-1**	**M-2**	**AE-20**	**AE-40**	**O**	**CO**	**PO**
Urban Reserve Residential	■	■	■	■						■	■			
Low Density Residential	■	■								■	■			
Low-Medium Density Residential	■	■								■	■			
Medium Density Residential		■	■							■	■			
Medium-High Density Residential			■	■						■	■			
High Density Residential				■						■	■			
Neighborhood Commercial					■					■	■			
General Commercial					■	■				■	■			
Community Commercial					■	■				■	■			
Highway Commercial					■	■				■	■			
Town Center					■	■				■	■			
Service Commercial							■			■	■			


Tulare County Zoning Districts
R-A
R-1
R-2
R-3
C-1
C-2
C-3
M-1
M-2
AE-20
AE-40
O
CO
PO
Office Commercial
Commercial Recreation
Urban Reserve Commercial
Mixed Use
Planned Community Area
Light Industrial
Heavy Industrial
Urban Reserve Industrial
Public/Quasi-Public
Public Recreation

Attachment A- 5 Funding Source

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CalTrans Active Transportation Program (ATP):

On September 26, 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation (Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354). The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program with a focus to make California a national leader in active transportation. The projects associated with the Completes Streets Program for the Community of Goshen will be suggested at the next available round of ATP funding.

Tulare County Measure R

On November 7, 2006, the voters of Tulare County approved Measure R, imposing a 1/2 cent sales tax for transportation within the incorporated and unincorporated area of Tulare County for the next 30 years. The transportation measure will generate slightly more than $652 million over 30 years to Tulare County's transportation needs.

Local Projects (35% of Measure R Funding)

The Measure R Expenditure Plan allocated 35% of revenues to local programs. Each city and the county will receive funding based on a formula using population, maintained miles, and vehicles miles traveled. The funding will help cities and the county to meet scheduled maintenance needs and to rehabilitate their aging transportation systems.

Regional Projects (50% of Measure R Funding)

The Regional Projects Program comprises 50% of Measure R and includes specific funding for: interchange improvements, regional bridges, regional signals, regional widening projects, and signal synchronization projects. These projects provide for the movement of goods, services, and people throughout Tulare County. Major highlights of this program include the funding of regional projects throughout the county.

Bike /Transit /Environmental Projects (14% of Measure R Funding)

The Goals of Measure R include air quality improvement efforts that will be addressed in the Measure R Expenditure Plan through the Transit/Bike/Environmental Program, which includes funding for transit, bike, and pedestrian environmental projects. The goal of this program is to expand or enhance public transit programs that address the transit dependent population, improve mobility through the construction of bike lanes, and have a demonstrated ability to get people out of their cars and improve air quality and the environment.

San Joaquin Valley Air Pollution Control District (SJAPCD) Bike Path Grants

The District has a grants program for the construction of bicycle infrastructure projects, including Class I (Bicycle Path Construction) or Class II (Bicycle Lane Striping) projects. These grants provide funding to assist with the development or expansion of a comprehensive bicycle-transportation network.

Strategic Growth Council Grants (SGC)
Affordable Housing - Sustainable Communities
The SGC will allocate 50% of its Cap and Trade funding toward disadvantaged communities and 50% for affordable housing. Projects will include: affordable housing that supports infill and compact development, transit capital and programs that support transit ridership, active transportation projects (infrastructure, and non-infrastructure), TOD projects, capital projects that implement Complete Streets, projects that reduce CHG emissions by reducing auto trips and VMT, acquisition of easements or other approaches to protect agricultural lands under threat of development, planning to support SCS (sustainable communities scope) implementation, including local plans, must be in draft or adopted SCS, subject to SGC guidelines.

Congestion Mitigation Air Quality (CMAQ) Tulare County Association of Governments (TCAG) Funds
The CMAQ funds are allocated through the TCAG. The CMAQ program funds transportation projects or programs that will contribute to improved air quality standards. Projects include: transportation activities, transportation control measures, public-private partnerships, alternative fuel programs, traffic flow improvements, transit, bicycle/pedestrian projects, rideshare activities, telecommuting, planning, experimental pilot projects, intermodal freight, and public outreach.

DOT: TIGER
TIGER is a multimodal, merit-based discretionary grant program that funds surface transportation capital projects, including transit and rail. Open to state, tribal, local agencies, and subdivisions.

California Deportment Block Grant (CDBG)
The CDBG Economic Development grant provides assistance to local businesses and low-income microenterprise owners to create or preserve jobs for low-income workers in rural communities. Funding includes planning and evaluation studies related to any activity eligible for these allocations, business lending, and public infrastructure.

Choice Neighborhoods
Choice Neighborhoods Planning Grants support the development of comprehensive neighborhood revitalization plans, which focused on directing resources to address three core goals: Housing, People and Neighborhoods. To achieve these core goals, communities must develop and implement a comprehensive neighborhood revitalization strategy, or Transformation Plan. The Transformation Plan will become the guiding document for the revitalization of the public and/or assisted housing units while simultaneously directing the transformation of the surrounding neighborhood and positive outcomes for families. Choice Neighborhoods Implementation Grants support those communities that have undergone a comprehensive local planning process and are ready to implement their "Transformation Plan" to redevelop the neighborhood.

California Department of Water Resources Prop 50 (Contaminant Removal)
Funds are available to disadvantage communities for developing UV or Ozone systems to disinfect drinking water or to set up pilot/demonstration sites.

Drought Response Funding California State Water Resources Control Board (SWRCB)

The Governor and Legislature have directed Department of Water Resource to expedite the solicitation and award of $200 million (of the $472.5 million) in IRWM funding to support projects and programs that provide immediate regional drought preparedness, increase local water supply reliability and the delivery of safe drinking water, assist water suppliers and regions to implement conservation programs and measures that are not locally cost-effective, and/or reduce water quality conflicts or ecosystem conflicts created by the drought.

DWR: Water-Energy Grant Program

The 2014 Water-Energy grant supports the implementation of residential, commercial, and institutional water efficiency programs or projects that reduce Green House Gas emissions and also reduce water and energy use. Funding will go toward urban water management, groundwater management, and surface water diversion.

CDPH Clean Water SRF

The Safe Drinking Water State Revolving Fund (SDWSRF) provides funding to correct public water system deficiencies based upon a prioritized funding approach that addresses the systems' problems that pose public health risks, systems with needs for funding to comply with requirements of the Safe Drinking Water Act, and systems most in need on a per household affordability basis.

iBank (Infrastructure State Revolving Fund Program and Economic Development Bank)

iBank provides low cost, long term financing for local governments to fund a variety of public infrastructure projects. (Although this is not a grant, loan rates are largely determined by level of distress within a disadvantaged community).

Attachment A- 6 Complete Streets

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Attachment A- 7 Public Outreach

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Appendices

Appendix A: Planning Commission Resolutions
Appendix B: Board of Supervisors Resolution

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Appendix A: Planning Commission Resolutions

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Appendix B: Board of Supervisors Resolution

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Appendix “H”

CEQA Noticing

Notice of Preparation

NOTICE OF PREPARATION

To: State Clearinghouse
PO Box 3044/ 1400 Tenth St
Sacramento CA 95814

From: County of Tulare – RMA
5961 S Mooney Blvd
Visalia CA 93277

Date: April 9, 2021

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) and Scoping Meeting

Project Title: Cutler-Orosi Community Plan (GPA 18-003, PZC 18-009, PZC 18-010, PZC 18-011)
Project Applicant: Tulare County Resource Management Agency
Project Location: Cutler/Orosi are located in northern Tulare County approximately 16 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia, the county seat. Both communities are located along State Route (SR) 63 about on -half mile apart near the base of the Sierra Nevada Mountain foothills.

Tulare County Resource Management Agency (RMA) will be the Lead Agency and will prepare an environmental impact report (EIR) for the Cutler-Orosi Community Plan. The County requests your agency's views as to the scope and content of the environmental information, which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will be able to use the EIR prepared by our agency when considering permits and other approvals for the project. In addition, please provide us with contact information of the person(s) in your agency that we may contact during the CEQA process.

The project description, location, and the potential environmental effects are contained in the attached materials. Technical studies/memoranda will be prepared for the following environmental resources: Air Quality, Biological Resources, Cultural Resources, Greenhouse Gases, Noise, and Transportation/Traffic.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A Scoping Meeting is scheduled: April 29, 2020 at 1:30 P.M in the Main Conference Room of the Tulare County Resource Management Agency at the address shown above. All interested parties are invited to attend and be heard in person or via online participation. Due to COVID-19, seating will be limited to 10 total persons and COVID compliance measures will be strictly observed; **in person participants will be required to check in with the lobby desk prior to entering.** The NOP can be viewed at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmental-impact-reports/cutler-orosi-community-plan-2021-update/. The draft Plan is available for review at the following website link: https://tularecounty.ca.gov/rma/index.cfm/planning-building/community-plans/draft-community-plans/cutler-orosi-community-plan-2019-update/

The meeting can also be attended online via telephone at: 1-669-900-9128, then enter 97867578291# **OR** via Zoom at: https://tularecounty-ca.zoom.us/j/97867578291?pwd=REpVSVhFeG8xY1lrcGc1NU9Md3RHdz09. Meeting ID: 978 6757 8291; Passcode: 079175.

Please direct your response to Hector Guerra, Chief Environmental Planner at the address shown above, by e-mail at hguerra@co.tulare.ca.us, or by telephone at 559-624-7121.

Please provide us with the name of a contact person in your agency.

4/9/21 Hector Guerra
Date Signature
Name: Hector Guerra
Title: Chief Environmental Planner

4/9/21 for Hector Guerra
Date Signature
Reed Schenke, P.E.
Title: RMA Director/Environmental Assessment Officer

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Description:
On September 30, 2014, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Cutler/Orosi Community Plan. The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, generally south of Avenue 424, east of Road 116, west of Road 134, and north of Avenue 400 as shown in Attachment "Figure 2." The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Cutler/Orosi Community Plan Update components are described later in this section will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 63 Corridor in order to implement the following General Plan goals:
   a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
   b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
   c) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
   d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
   e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

2) Improvements for a "disadvantaged community" - It is expected that the community planning areas will be improved for the following reasons:
   a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
   b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
   c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

Location(s): Cutler is generally bound by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses approximately 0.8 square miles in area. Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Orosi is generally bound by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses approximately 2.4 square miles in area. It has direct access to/from State Route (SR) 63. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural

production, vacant lands, and scattered residential homes. The community of East Orosi is located to the northeast and is not a part of this Project.

Maps: See Attachment "Figure 1" and "Figure 2" for the Vicinity Map and Proposed Urban Development Boundary for Cutler-Orosi.

Land Uses: One of the most important purposes of the Cutler/Orosi Community Plan is to establish land use patterns and development policies and standards for the community for the planning period, through the year 2030. The general intent of the land use plan for Cutler/Orosi is to identify the most appropriate types and distribution of land uses for the community, based on environmental, circulation, infrastructure, services, opportunities and constraints, urban development boundary suitability analysis and other economic capacities and concerns discussed in some chapters of the Community Plan.

Residential: To provide for a variety of living environments and opportunities for affordable housing, the Cutler/Orosi Community Plan establishes three residential densities: low, medium, and high. Low density residential allows six units or less per acre; medium density allows 4 to 14 units per acre and high density allows 15 to 29 units per acre.

Residential Reserve: Land designated for future residential use, should remain in accordance with Policy 5.1. It should be noted that a general plan amendment is not agricultural use until it is determined that conditions warrant conversion to residential use, needed to develop land in a reserve classification.

General Commercial: Commercial development first appeared near the intersection of SR 63 and Avenue 416, and have since spread in strip fashion along these routes.

Service Commercial: Orosi contains one area approximately 12 acres of service commercial, located south of Avenue 416. Cutler contains two areas (approximately 68 acres and approximately 11 acres of Service Commercial) along the railbed footprint.

Professional Office: Family Healthcare Network. Two one acre parcels.

Industrial: Currently, industry in the Cutler/Orosi area is concentrated along the railbed. Included in this area are packing houses, cold storage facilities, a box manufacturing plant, and an agricultural chemical company. Orosi has a five (5) acre parcel south of Avenue 416. Cutler is along the railbed and on east side of SR63

Industrial Reserve: Land within the Plan Area which is recognized as suitable for industrial uses or agriculturally-related industries and is designated for eventual conversion to commercial use, but which is expected to be left in exclusive agricultural zoning until it is determined that conditions warrant conversion to industrial use, in accordance with Policy 5.1.

Agriculture: Agriculture is the foundation of Tulare County's economy. For this reason, it is important that agricultural lands be preserved and that agricultural operations remain free of adjacent incompatible land uses, which may hamper the operation. The Cutler/Orosi Community Plan takes into consideration surrounding agricultural operations and their needs to be free of intruding urban uses. Where possible, the UDB follows a road, railroad, or creek so that there is some spatial distance between future urban uses and agriculture.

Park: Ledbetter Park is approximately 11 acres in size and is located one mile northwest of Cutler on Road 124/SR 63.

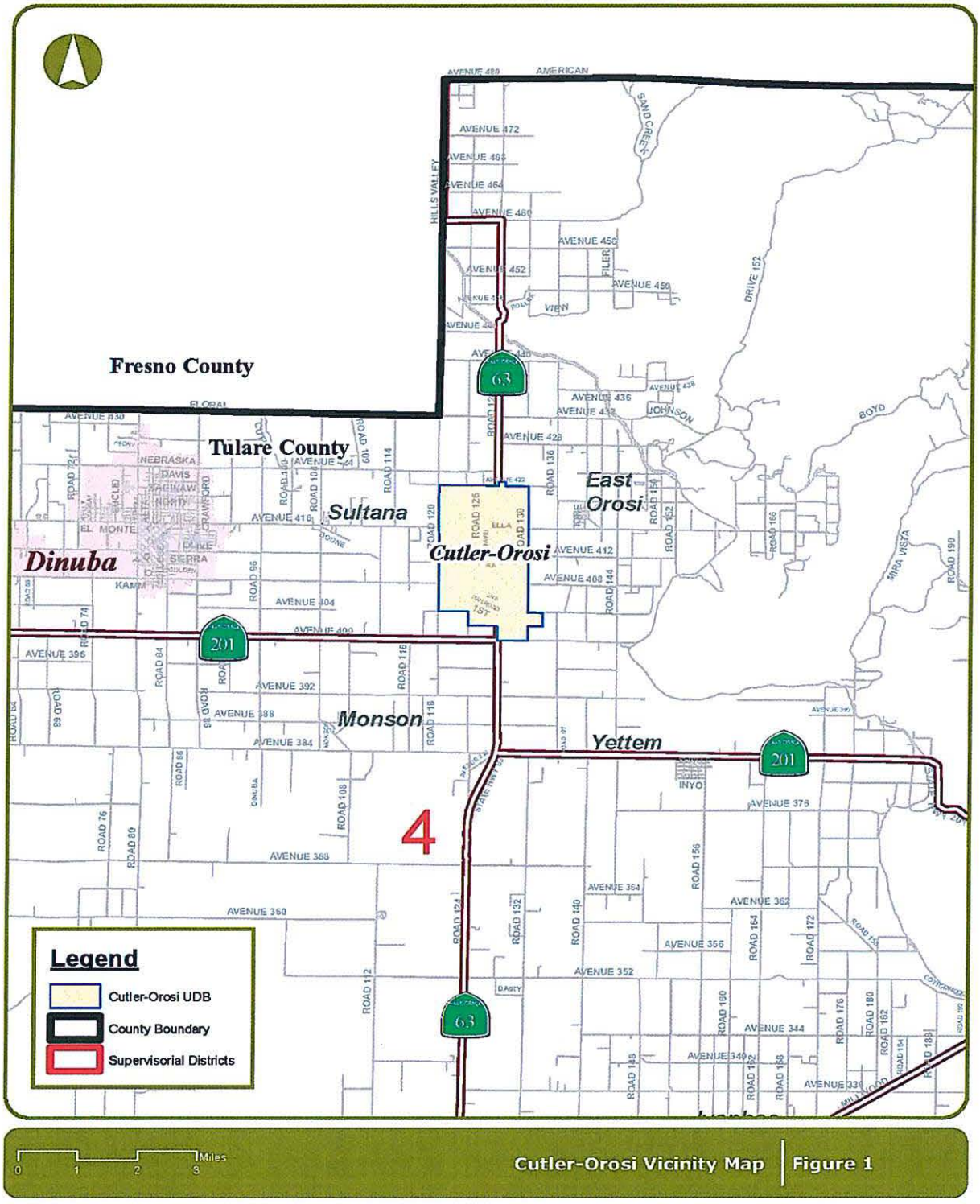
Potential Environmental Impacts: It is anticipated that potential environmental impacts may include, but are not limited to: biological resources, cultural resources, air quality, green house gases, hydrology, water supply and water quality, land use and planning, noise, and traffic.

Reviewing Agencies:

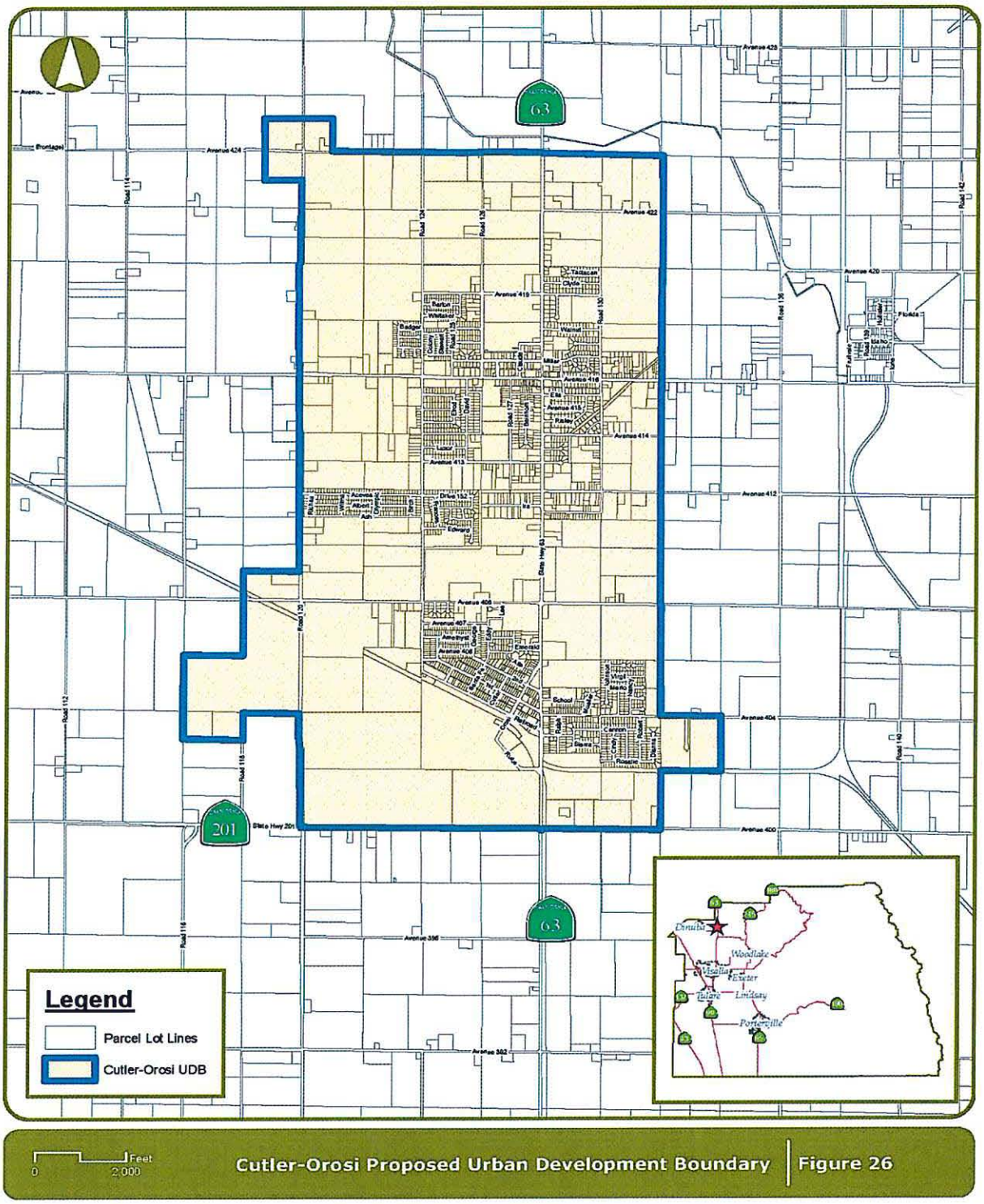
1) **State and Federal:**
   a) California Air Resources Board
   b) California Department of Conservation, Division of Land Resource Protection, CA Geological Survey
   c) California Department of Fish and Wildlife Region #4
   d) California Department of Food & Agriculture
   e) California Department of Forestry & Fire Protection
   f) California Department of Resources Recycling and Recovery (CalRecycle)
   g) California Department of Toxic Substance Control
   h) California Department of Transportation (Caltrans) District #6
   i) California Department of Transportation Planning
   j) California Highway Patrol
   k) Native American Heritage Commission
   l) Natural Resources Agency
   m) Office of Historic Preservation
   n) Public Utilities Commission
   o) State Water Resources Control Board (Water Quality)
   p) United States Army Corps of Engineers
   q) United States Department of Agriculture Natural Resources Conservation Service
   r) United States Fish and Wildlife Service

2) **Local and Regional:**
   a) Alta Irrigation District
   b) City of Dinuba
   c) Central Valley Regional Water Quality Control Board, Central Region - Fresno
   d) Pacific Gas & Electric Company
   e) San Joaquin Valley Unified Air Pollution Control District (Air District)
   f) Tulare County Agricultural Commissioner
   g) Tulare County Association of Governments (TCAG)
   h) Tulare County Farm Bureau
   i) Tulare County Fire Warden
   j) Tulare County Health and Human Services Agency, Environmental Health Services Division
   k) Tulare County Local Agency Formation Commission
   l) Tulare County Office of Emergency Services
   m) Tulare County Resource Conservation District
   n) Tulare County Resource Management Agency:
      i) Economic Development and Planning Branch: Project Review, Environmental Planning, and Building and Housing Divisions
      ii) Fire
      iii) Flood Control
      iv) Public Works Branch
   o) Tulare County Sheriff's Office
   p) Tulare County UC Cooperative Extension

Attachment "Figure 1" - Vicinity Map (Existing Urban Development Boundary)



Attachment "Figure 2" – Aerial Map (Proposed Urban Development Boundary)



Notice of Preparation Tracking Table

NOTICE OF PREPARATION
CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

AGENCY / ENTITY	DOCUMENTS SENT						DELIVERY METHOD					COMMENTS RECEIVED
	Electronic				Hard Copy							
	Electronic Submittal Form	NOC	NOP	Notice	Notice	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
AVAILABILITY OF PUBLIC VIEWING												
Tulare County Website: https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmental-impact-reports/cutler-orosi-community-plan-2021-update/												
Tulare County Resource Management Agency 5961 S. Mooney Blvd. Visalia, CA 93277-9394						X	4/9/21					
Tulare County Clerk/Recorder County Civic Center Courthouse, Room 105 221 S. Mooney Blvd. Visalia, CA 93291 mbhansen@tularecounty.ca.gov			X					4/9/21				
Visalia Main Branch Library Attn: Darla Wegener, County Librarian 200 W. Oak Ave. Visalia, CA 93291 DWegener@tularecounty.ca.gov questions@tularecountylibrary.org			X					4/9/21				
STATE CLEARINGHOUSE (Agencies below were marked with "X" on the NOC)	X	X	X					4/9/21 direct upload				4/9/21, SCH responded with SCH# 2021040258
• Air Resources Board												
• Department of Conservation												
• Department of Fish and Wildlife Region #4												
• Department of Food and Agriculture												
• Department of Forestry & Fire Protection												
• Department of Resources and Recycling and Recovery												
• Department of Toxic Substances Control												Letter dated 4/13/21 from Gavin McCreary, Project Manager – Site Evaluation and Remediation Unit
• Department of Transportation – District #6												
• Department of Transportation – Transportation Planning												

NOTICE OF PREPARATION
CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

AGENCY / ENTITY	DOCUMENTS SENT						DELIVERY METHOD					COMMENTS RECEIVED
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	Electronic Submittal Form	NOC	NOP	Notice	Notice	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
• California Highway Patrol												
• Native American Heritage Commission												Letter dated 4/12/21 from Nancy Gonzalez-Lopez, Cultural Resources Analyst
• Natural Resources Agency												
• Office of Historic Preservation												
• Public Utilities Commission												
• State Water Resources Control Board (Water Quality)												
• Regional Water Quality Control Board – Region 5F												
MILITARY												
Mr. David S. Hulse Naval Facilities Engineering Command Community Plans Liaison Officer (CPLO) 1220 Pacific Highway AM-3 San Diego, CA 92132						X				4/12/21 via standard mail		
FEDERAL AGENCIES												
US Army Corps of Engineers Sacramento District 1325 J Street, Room 1350 Sacramento, CA 95814-2922						X				4/12/21 via standard mail		
US Department of Agriculture Natural Resources Conservation Service 1400 Independence Ave SW Room 5105-A Washington, DC 20250-1111						X				4/12/21 via standard mail		
US Department of Agriculture Natural Resources Conservation Service Visalia Service Center Attn: Lurana Strong, District Conservationist 3530 W. Orchard Ct. Visalia, CA 93277-7055 lurana.strong@usda.gov			X					4/9/21				

NOTICE OF PREPARATION
CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

AGENCY / ENTITY	DOCUMENTS SENT						DELIVERY METHOD					COMMENTS RECEIVED
	Electronic				Hard Copy							
	Electronic Submittal Form	NOC	NOP	Notice	Notice	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
United States Fish and Wildlife Service Sacramento Fish & Wildlife Office 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846						X				4/12/21 via standard mail		
STATE & REGIONAL AGENCIES												
CA Environmental Protection Agency P.O. Box 2815 Sacramento, CA 95812-2815						X				4/12/21 via standard mail		
CA Dept. of Fish and Wildlife Region 4 – Central Region 1234 E. Shaw Avenue Fresno, CA 93710 R4CEQA@wildlife.ca.gov			X					4/9/21				4/9/21, email from RWQCB verifying receipt of the NOP
CA Dept. of Toxic Substances Control P.O. Box 806 Sacramento, CA 95812-0806						X				4/12/21 via standard mail		
CA Dept. of Transportation, District 6 1352 W. Olive Ave P.O. Box 12616 Fresno, CA 93778-2616 david.deel@dot.ca.gov lorena.mendibles@dot.ca.gov			X					4/9/21				4/12/21, email from David Deel verifying receipt of NOP 4/12/21, email from Lorena Mendibles verifying receipt of NOP Letter dated 5/18/21 from David Deel, Associate Transportation Planner
CA Department of Water Resources 1416 Ninth Street Sacramento, CA 95814						X				4/12/21 via standard mail		
CA Natural Resources Agency 1416 Ninth Street, Suite 1311 Sacramento, CA 95814						X				4/12/21 via standard mail		

NOTICE OF PREPARATION
CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

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Native American Heritage Commission 1550 Harbor Blvd, Suite 100 West Sacramento, CA 95691 NAHC@nahc.ca.gov			X					4/9/21				
State Water Resources Control Board P.O. Box 100 Sacramento, CA 95812						X				4/12/21 via standard mail		
Regional Water Quality Control Board Region 5 – Central Valley 1685 E Street Fresno, CA 93706 CentralValleyFresno@waterboards.ca.gov			X					4/9/21				4/9/21, email confirming receipt of NOP
San Joaquin Valley APCD Permit Services – CEQA Division 1990 E. Gettysburg Ave. Fresno, CA 93726 CEQA@valleyair.org			X					4/9/21				Email dated 7/28/21 from Harout Sagherian, Air Quality Specialist
Pacific Gas and Electric Land Management Team 6111 Bollinger Canyon Rd., 3rd Floor, Mail Code: BR1Y3A, San Ramon, CA 94583 pgeplanreview@pge.com			X					4/9/21				Letter dated 4/13/21 from Plan Review Team, Land Management
LOCAL AGENCIES												
Alta Irrigation District Attn: Chad Wegley, General Manager 289 N. L St. Dinuba, CA 93618 cw@altaid.org			X					4/9/21				
City of Dinuba Attn: Luis Patlan, City Manager 405 E. El Monte Way Dinuba, CA 93618 LPatlan@dinuba.ca.gov			X					4/9/21				
City of Dinuba Planning & Development Services 1088 E. Kamm Ave. Dinuba, CA 93618						X				4/12/21 via standard mail		

NOTICE OF PREPARATION
CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

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Cutler-Orosi Joint Unified School District Attn: Yolanda Valdez, Superindendent 12623 Avenue 416 Orosi, CA 93647 yvaldez@cojusd.org			X					4/9/21				
Tulare County Agricultural Commissioner 4437 S. Laspina Street Tulare CA 93274 TTucker@co.tulare.ca.us			X					4/9/21				
Tulare County Association of Governments Attn: Ted Smalley 210 N. Church Street, Suite B Visalia, CA 93291 TSmalley@tularecog.org			X					4/9/21				
Tulare County Farm Bureau Tricia Stever Blattler, Exec. Director P.O. Box 748 Visalia, CA 93291 pstever@tulcofb.org			X					4/9/21				
Tulare County Fire Warden 835 S. Akers Street Visalia, CA 93277						X	4/12/21					
Tulare County Health & Human Services Agency Environmental Health Department Attn: Allison Shuklian 5957 S. Mooney Blvd Visalia, CA 93277 AShuklia@tularehhsa.org			X					4/9/21				
Tulare County Local Agency Formation Commission 210 N. Church Street, Suite B Visalia, CA 93291						X				4/12/21 via standard mail		
Tulare County Office of Emergency Services Attn: Sabrina Bustamante / Megan Fish 5957 S. Mooney Blvd Visalia, CA 93277 slbustamante@co.tulare.ca.us mfish@co.tulare.ca.us			X					4/9/21				

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CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
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Tulare County Resource Conservation District 3530 W. Orchard Ct Visalia, CA 93277						X				4/12/21 via standard mail		
Tulare County Resource Management Agency 5961 S. Mooney Blvd. Visalia, CA 93277 Economic Development – Julieta Martinez jmartinez2@co.tulare.ca.us Fire – Gilbert Portillo gportillo@co.tulare.ca.us Flood Control – Reed Schenke & Ross Miller rschenke@co.tulare.ca.us rmiller@co.tulare.ca.us Public Works – Hernan Beltran & Johnny Wong hbeltran@co.tulare.ca.us; jwong@co.tulare.ca.us			X					4/9/21				
Tulare County Sheriff's Office – Headquarters 2404 W. Burrel Avenue Visalia, CA 93291							4/12/21					
Tulare County U.C. Cooperative Extension UC Cooperative Extension 4437 S. Laspina Street Tulare, CA 93274						X				4/12/21 via standard mail		
TRIBES												
Kern Valley Indian Tribe Robert Robinson, Co-Chairperson P.O. Box 1010 Lake Isabella, CA 93240 bbutterbredt@gmail.com			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1695	4/20/21	
Kern Valley Indian Tribe Julie Turner, Secretary P. Box 1010 Lake Isabella, CA 93240			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1688	4/20/21	

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CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

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meindiangirl@sbcglobal.net												
Kern Valley Indian Tribe Brandi Kendricks 30741 Foxridge Court Tehachapi, CA 93561 krazykendricks@hotmail.com			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1671	4/22/21 per USPS website	
Santa Rosa Rancheria Tachi Yokut Tribe Leo Sisco, Chairperson 16835 Alkali Dr. P. O. Box 8 Lemoore, CA 93245 LSisco@tachi-yokut-nsn.gov			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1664	4/14/21 per USPS website	
Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Shana Powers, Director 16835 Alkali Dr. P. O. Box 8 Lemoore, CA 93245 SPowers@tachi-yokut-nsn.gov			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1657	4/14/21 per USPS website	
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P.O. Box 226 Lake Isabella, CA 93240 rgomez@tubatulabal.org			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1640	4/22/21	
Tule River Indian Tribe William J. Garfield, Chairperson P. O. Box 589 Porterville, CA 93258 william.garfield@tulerivertribe-nsn.gov			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1633	4/19/21	
Tule River Indian Tribe Neil Peyron, Vice-Chairperson P. O. Box 589 Porterville, CA 93258 neil.peyron@tulerivertribe-nsn.gov			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1626	4/19/21	

NOTICE OF PREPARATION
CUTLER/OROSI COMMUNITY PLAN 2021 UPDATE
(GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010)

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Tule River Indian Tribe Dept. of Environmental Protection Kerri Vera, Director P. O. Box 589 Porterville, CA 93258 tuleriverenv@yahoo.com kerri.vera@tulerivertribe-nsn.gov			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1619	4/19/21	
Tule River Indian Tribe Dept. of Environmental Protection Felix Christman, Archaeological Monitor P. O. Box 589 Porterville, CA 93258 Tuleriverarchmon1@gmail.com			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1596	4/19/21	
Wuksache Indian Tribe/ Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906 Kwood8934@aol.com			X			X		4/9/21		4/12/21 7014 0150 0001 1537 1602	4/16/21 per USPS website	
OTHER INTERESTED PARTIES												
Michael Lozeau Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 michael@lozeaudrury.com			X					4/9/21				
Hannah Hughes Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 hannah@lozeaudrury.com			X					4/9/21				
Komalpreet Toor Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 komal@lozeaudrury.com			X					4/9/21				

NOTICE OF PREPARATION
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Maya Vishwanath Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 maya@lozeaudrury.com			X					4/9/21				

Notice of Preparation
Notifications Sent

From:	Jessica R Willis
To:	Maegan B Hansen; Chelsi L Walters; Ruth M Meneses; Valerie Lopez; Mayra L Guereca
Cc:	Hector Guerra; Aaron R Bock
Subject:	NOP for posting
Date:	Friday, April 9, 2021 11:58:32 AM
Attachments:	Cutler-Orosi_NOP_4-9-21.pdf

Good morning all.

Please find attached the Notice of Preparation for the Cutler/Orosi Community Plan 2021 Update (GPA 18-003. PZC 18-011. PZC 18-009. PZC 18-010). Pursuant to CEQA Guidelines Section 15082, please post this for the required 30-day review and commenting period.

Thank you.

Jessica Willis
Planner IV
Tulare County Resource Management Agency
Environmental Planning Division
Ph: (559) 624-7122
Email: JWillis@tularecounty.ca.gov

From:	Jessica R Willis
To:	Michael Lozeau (michael@lozeaudrury.com); Hannah Hughes (hannah@lozeaudrury.com); Komalpreet Toor (komal@lozeaudrury.com); "maya@lozeaudrury.com"
Cc:	Hector Guerra; Cheng Chi
Subject:	NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Date:	Friday, April 9, 2021 6:15:00 PM
Attachments:	Cutler-Orosi_NOP_4-9-21.pdf
Importance:	High

Good evening.

Please find attached the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Cutler/Orosi Community Plan 2021 Update.

The NOP is available on the RMA website at https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmental-impact-reports/cutler-orosi-community-plan-2021-update/.

The 30-day review and comment period, which has been approved by the Office of Planning and Research/State Clearinghouse, begins April 9, 2021 and ends May 10, 2021. Please submit comments to Mr. Hector Guerra, Chief Environmental Planner, by email at hguerra@tularecounty.ca.gov or by US Postal Service at Tulare County Resource Management Agency, 5961 S. Mooney Blvd., Visalia, CA 93277.

Please feel free to contact me by phone or email if I can be of further assistance.

Best Regards.

Jessica Willis, Planner IV
Tulare County Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division
Phone: (559) 624-7122
E-mail: JWillis@tularecounty.ca.gov

From:	Jessica R Willis
To:	"cw@altaid.org"; "lpatlan@dinuba.ca.gov"; "yvaldez@cojusd.org"
Cc:	Hector Guerra; Cheng Chi
Subject:	NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Date:	Friday, April 9, 2021 6:15:00 PM
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Please feel free to contact me by phone or email if I can be of further assistance.

Best Regards.

Jessica Willis, Planner IV
Tulare County Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division
Phone: (559) 624-7122
E-mail: JWillis@tularecounty.ca.gov

From:	Jessica R Willis
To:	Lurana Strong (lurana.strong@usda.gov); CDFW Tracking (R4CEQA@wildlife.ca.gov); David Deel (david.deel@dot.ca.gov); "Mendibles, Lorena@DOT"; Native American Heritage Commission (nahc@nahc.ca.gov); Central RWQCB (CentralValleyFresno@waterboards.ca.gov); CEQA Division (CEQA@valleyair.org); "pgeplanreview@pge.com"
Cc:	Hector Guerra; Cheng Chi
Subject:	NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Date:	Friday, April 9, 2021 6:15:00 PM
Attachments:	Cutler-Orosi_NOP_4-9-21.pdf
Importance:	High

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Please feel free to contact me by phone or email if I can be of further assistance.

Best Regards.

Jessica Willis, Planner IV
Tulare County Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division
Phone: (559) 624-7122
E-mail: JWillis@tularecounty.ca.gov

From:	Jessica R Willis
To:	Robert Robinson (bbutterbredt@gmail.com); Julie Turner (meindiangirl@sbcglobal.net); Brandy Kendricks (krazykendricks@hotmail.com); Leo Sisco (LSisco@tachi-yokut-nsn.gov); Shana Powers (SPowers@tachi-yokut-nsn.gov); Robert L. Gomez (rgomez@tubatulabal.org); "william.garfield@tulerivertribe-nsn.gov"; Kerri Vera (tuleriverenv@yahoo.com); "kerri.vera@tulerivertribe-nsn.gov"; Felix Christman (tuleriverarchmon1@gmail.com); Ken Woodrow (Kwood8934@aol.com)
Cc:	Hector Guerra; Cheng Chi
Subject:	NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Date:	Friday, April 9, 2021 6:15:00 PM
Attachments:	Cutler-Orosi_NOP_4-9-21.pdf
Importance:	High

Good evening.

In October 2018 Tulare County notified your Tribe of the proposed Cutler/Orosi Community Plan Update project pursuant to AB 52 and SB 18. As such, the County is submitting the attached Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Cutler/Orosi Community Plan 2021 Update. The NOP will also be sent to you via Certified Mail early next week. Pursuant to CEQA Guidelines, please submit your comments within 30 days of receipt of the NOP.

Best Regards.

Jessica Willis, Planner IV
Tulare County Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division
Phone: (559) 624-7122
E-mail: JWillis@tularecounty.ca.gov

From:	Jessica R Willis
To:	Darla F Wegener; Tom T Tucker II; Theodore Smalley (TSmalley@tularecog.org); Tricia Stever; Allison Shuklian (AShuklia@tularehhsa.org); Sabrina Bustamante (SLBustamante@tularehhsa.org); Megan Fish (MFish@tularehhsa.org); Julieta Martinez; Gilbert Portillo; Reed Schenke; Ross W Miller; Hernan Beltran Herrera; Johnny Wong; questions@tularecountylibrary.org
Cc:	Hector Guerra; Cheng Chi
Subject:	NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Date:	Friday, April 9, 2021 6:15:00 PM
Attachments:	Cutler-Orosi_NOP_4-9-21.pdf
Importance:	High

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The 30-day review and comment period, which has been approved by the Office of Planning and Research/State Clearinghouse, begins April 9, 2021 and ends May 10, 2021. Please submit comments to Mr. Hector Guerra, Chief Environmental Planner, by email at hguerra@tularecounty.ca.gov or by US Postal Service at Tulare County Resource Management Agency, 5961 S. Mooney Blvd., Visalia, CA 93277.

Please feel free to contact me by phone or email if I can be of further assistance.

Best Regards.

Jessica Willis, Planner IV
Tulare County Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division
Phone: (559) 624-7122
E-mail: JWillis@tularecounty.ca.gov

Scoping Meeting

Cutler-Orosi Community Plan Update Scoping Meeting Attendees April 29, 2021, 1:30 p.m.		
Name	**How Participated** (virtual meeting or in person)	**Comments**
Darla Wegener, County Librarian	Via Zoom	Please submit DEIR to Orosi Library; please notify her via email when DEIR is available

Comments Received on the Notice of Preparation

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 12, 2021

Tulare County
Resource Management Agency
APR 20 2021

Hector Guerra
County of Tulare Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277-9394

Re: 2021040258, Cutler/Orosi Community Plan 2021 Update (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010) Project, Sacramento County

Dear Mr. Guerra:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

April 13, 2021

Mr. Hector Guerra
Chief Environmental Planner
County of Tulare Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277-9394
HGuerra@tularecounty.ca.gov

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR CUTLER/OROSI COMMUNITY PLAN 2021 (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010) – DATED APRIL 9, 2021 (STATE CLEARINGHOUSE NUMBER: 2021040258)

Mr. Guerra:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation of an Environmental Impact Report (EIR) for Cutler/Orosi Community Plan 2021 Update (GPA 18-003, PZC 18-011, PZC 18-009, PZC 18-010) (Project). The Lead Agency is receiving this notice from DTSC because the Project includes one or more of the following: groundbreaking activities, work in close proximity to a roadway, work in close proximity to mining or suspected mining or former mining activities, presence of site buildings that may require demolition or modifications, importation of backfill soil, and/or work on or in close proximity to an agricultural or former agricultural site.

DTSC recommends that the following issues be evaluated in the EIR Hazards and Hazardous Materials section:

1. The EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.
2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This

practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil DTSC, recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the EIR.

3. If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/aml_handbook.pdf).

4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers* (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118.pdf).

5. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf).

6. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Ag-Guidance-Rev-3-August-7-2008-2.pdf).

DTSC appreciates the opportunity to comment on the EIR. Should you need any assistance with an environmental investigation, please submit a request for Lead Agency Oversight Application, which can be found at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/VCP_App-1460.doc. Additional information regarding voluntary agreements with DTSC can be found at: https://dtsc.ca.gov/brownfields/.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

Sincerely,

Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

From: Harout Sagherian
To: Jessica R Willis
Cc: Hector Guerra
Subject: RE: NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Date: Monday, August 23, 2021 10:21:37 AM
Attachments: image001.png

Hi Jessica,

Thank you for the updated information and I look forward to the email in (possibly) September.

Best regards,

Harout Sagherian
Air Quality Specialist
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave, Fresno. CA 93726
Harout.Sagherian@valleyair.org
Tel. 559-230-5860
Fax. 559-230-6112

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From: Jessica R Willis <JWillis@tularecounty.ca.gov>
Sent: Monday, August 23, 2021 9:51 AM
To: Harout Sagherian <Harout.Sagherian@valleyair.org>
Cc: Hector Guerra <HGuerra@tularecounty.ca.gov>
Subject: RE: NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update

Good morning Harout.

I am following up on the email you sent in April (below). The Draft EIR is still in the preparation stages; however, the County hopes to release soon, possibly sometime in September. You will be notified when and where (on the County website) the DEIR will be available.

Jessica Willis
Planner IV
RMA Environmental Planning
Ph: (559) 624-7122

From: Harout Sagherian <Harout.Sagherian@valleyair.org>

Sent: Wednesday, April 28, 2021 10:46 AM
To: Jessica R Willis <JWillis@tularecounty.ca.gov>; Hector Guerra <HGuerra@tularecounty.ca.gov>
Cc: Cheng Chi <CChi@tularecounty.ca.gov>
Subject: RE: NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update

Good morning Jessica and Hector,

Please provide me with a copy of the Draft EIR for the above mentioned project. I am working on the CEQA comment letter for the air district and I need a little more information from the DEIR.

Please feel free to contact me if you have any questions.

Best regards,

Harout Sagherian
Air Quality Specialist
San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave, Fresno. CA 93726
Harout.Sagherian@valleyair.org
Tel. 559-230-5860
Fax. 559-230-6112

From: Jessica R Willis <JWillis@tularecounty.ca.gov>
Sent: Friday, April 9, 2021 6:15 PM
To: Lurana Strong (lurana.strong@usda.gov) <lurana.strong@usda.gov>; CDFW Tracking (R4CEQA@wildlife.ca.gov) <R4CEQA@wildlife.ca.gov>; David Deel (david.deel@dot.ca.gov) <david.deel@dot.ca.gov>; Mendibles, Lorena@DOT <lorena.mendibles@dot.ca.gov>; Native American Heritage Commission (nahc@nahc.ca.gov) <nahc@nahc.ca.gov>; Central RWQCB (CentralValleyFresno@waterboards.ca.gov) <CentralValleyFresno@waterboards.ca.gov>; CEQA E-mail <CEQA@valleyair.org>; pgeplanreview@pge.com
Cc: Hector Guerra <HGuerra@tularecounty.ca.gov>; Cheng Chi <CChi@tularecounty.ca.gov>
Subject: NOP of an EIR for the Cutler/Orosi Community Plan 2021 Update
Importance: High

Good evening.

Please find attached the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Cutler/Orosi Community Plan 2021 Update.

The NOP is available on the RMA website at https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmental-impact-reports/cutler-orosi-community-plan-2021-update/.

The 30-day review and comment period, which has been approved by the Office of Planning and Research/State Clearinghouse, begins April 9, 2021 and ends May 10, 2021. Please submit comments to Mr. Hector Guerra, Chief Environmental Planner, by email at hguerra@tularecounty.ca.gov or by US Postal Service at Tulare County Resource Management Agency, 5961 S. Mooney Blvd., Visalia, CA 93277.

Please feel free to contact me by phone or email if I can be of further assistance.

Best Regards.

Jessica Willis, Planner IV
Tulare County Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division
Phone: (559) 624-7122
E-mail: JWillis@tularecounty.ca.gov

California Department of Transportation

DISTRICT 6 OFFICE
1352 WEST OLIVE AVENUE | P.O. BOX 12616 | FRESNO, CA 93778-2616
(559) 981-1041 | FAX (559) 488-4195 | TTY 711
www.dot.ca.gov

May 18, 2021

06-TUL-63-GEN
NOP
CUTLER/OROSI COMMUNITY PLAN
2020 UPDATE
SCH # N/A
GTS #: 22588

SENT VIA EMAIL

Mr. Hector Guerra
Chief Environmental Planner
Tulare County Resource Management Agency
5961 S Mooney Blvd.
Visalia, CA 93277

Dear Mr. Guerra:

Thank you for the opportunity to review the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the 2020 Update to the Cutler/Orosi Community Plan (Project). The Project Study Area Boundary is generally south of Avenue 424, east of Road 116, west of Road 134, and north of Avenue 400. The 2 adjacent unincorporated communities of Cutler and Orosi are about 1/2 mile apart. Both communities are located directly along and utilize State Route (SR) 63. The communities are located in northern Tulare County approximately 15 miles east of State Route (SR) 99 and approximately 15 miles north of Visalia.

The proposed 2020 Cutler-Orosi Community Plan amends the 1988 Cutler-Orosi Community Plan and implements the 2012 Tulare County General Plan in regards to Land Use, Transportation and Circulation Elements by incorporating the County's General Plan land use designations, circulation functional classifications, and development policies into the 2020 Cutler-Orosi Community Plan.

The proposed 2020 Cutler-Orosi Community Plan states consistency with the 2012 Tulare County General Plan 2030 Update and will include the following primary goals and objectives:

- Land Use and Environmental Planning - Promote development within planning areas next to the Regional SR 63 Corridor,

- Improvements for this "Disadvantaged Community" with faster project

processing and thereby increasing the potential for housing grant awards,

- Strengthen the Relationship with Tulare County Association of Governments (TCAG) to help facilitate funding and implementation of key transportation programs, such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network. Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. According to the Caltrans 2014 Transportation Concept Report (TCR), the communities of Cutler/Orosi are located within segment 10 of SR 63. SR 63 within this segment is currently a 4-lane conventional freeway and remains the same for the Ultimate Transportation Concept beyond 2035.

2. Alternative transportation policies should be applied to land use development within Cutler-Orosi community plan area. An assessment of multi-modal facilities should be conducted to develop an integrated multi-modal transportation system to serve and help alleviate traffic congestion caused by the project and related development in the Cutler-Orosi community. The assessment should include the following:

   a. Pedestrian walkways should link to transit facilities, as well as other walkways or trails within the Cutler-Orosi community.

   b. Consider coordinating connections to local and regional bicycle pathways to further encourage the use of bicycles for commuter and recreational purposes.

   c. Transit services should be extended within the Cutler-Orosi community.

3. Caltrans acknowledges that Tulare County is currently working to install bus stops along SR 63 within the Cutler-Orosi community.

4. Caltrans does not have any current improvement projects along SR 63 in the Cutler-Orosi community, at this time.

5. Caltrans is working with Cutler/Orosi Joint Union School District and Tulare County regarding potential intersection improvements at SR 63/Avenue 419 intersection.

6. Caltrans recommends implementing "smart growth" principles for development in the Cutler-Orosi community regarding parking solutions, providing alternative transportation choices to residents and employees. Alternative transportation choices may include but are not limited to parking for carpools/vanpools, car-share and/or ride-share programs.

7. Active Transportation Plans and Smart Growth efforts support the state's 2050 Climate goals. Caltrans supports reducing Vehicle Miles Traveled (VMT) and Green House Gas (GHG) emissions in ways that increase the likelihood people will use and benefit from a multimodal transportation network.

8. Based on Caltrans VMT-Focused Transportation Impact Study Guide, dated May 20, 2020 and effective as of July 1, 2020, Caltrans seeks to reduce single occupancy vehicle trips, provide a safe transportation system, reduce per capita Vehicle Miles Traveled (VMT), increase accessibility to destinations via cycling, walking, carpooling, transit and reduce greenhouse gas (GHG) emissions. Caltrans recommends that the County of Tulare work with land use developers to further implement improvements to reduce vehicles miles traveled and offer a variety of transportation modes within the Cutler-Orosi community.

9. Caltrans recommends land use projects should incorporate charging stations for electric vehicles as part of the statewide efforts to reduce greenhouse gas emissions.

If you have any other questions, please call me at (559) 981-1041.

Sincerely,

DAVID DEEL
Associate Transportation Planner
Transportation Planning – South