DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

SHEPHERD NORTH PROJECT

Volume I - DEIR

JULY 2023

Prepared for:

City of Clovis | Planning Division
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A Land Use Planning, Design, and Environmental Firm

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INTRODUCTION

The City of Clovis, as the lead agency, determined that the proposed Shepherd North Project is a "project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

The EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This EIR identifies issues determined to have no impact or a less than significant impact and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the Notice of Preparation (NOP) were considered in preparing the analysis in this EIR.

PROJECT DESCRIPTION

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area is planned to include the development of up to 101 single-family residences with lot sizes ranging from approximately 5,400 square feet to 15,900 square feet. The southern portion of the Development Area is planned for smaller lot single-family residences, with lot sizes ranging from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,500 square feet.

The proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south.

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]

    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.

    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the proposed Project that are known to the City of Clovis, were raised during the NOP process, or raised during preparation of the Draft EIR. This Draft EIR discusses impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas and climate resources, hazards and hazardous materials, hydrology and water quality, land use, population and housing, noise, public services and recreation, transportation and circulation, and utilities and service systems.

The following are topics of public concern or potential controversy that have become known to the City staff based on public input, known regional issues, and staff observations:

- Agricultural: conversion of farmland, impacts to adjacent farmland;
- Air Quality/Greenhouse Gas Emissions/Energy: construction emissions, operations emissions, health risks, ambient air quality, emissions reduction, vegetation barriers/urban greening, clean lawn/garden equipment, District rules/regulations,
- Biological: Swainson's hawk and other raptors;
- Hazards/Hazardous Materials: Use or storage of hazardous materials and wastes, underground petroleum storage tanks, protection of groundwater, proper destruction of wells and septic tanks, appropriate construction equipment operations and maintenance,
- Hydrology/Water Supply Concerns: well water recharge/groundwater, irrigation, water supply; non-potable water supply, flood control/drainage, impervious surfaces, storm drainage easements;
- Land Use and Planning: Affordable housing;
- Noise: Compliance with the Noise Element, elevated noise levels;

[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site', throughout this EIR.

- Traffic: Need for a traffic study, additional traffic, need for street improvements, need for improvements on internal roads and access to Fowler/Behymer; vehicle miles traveled, intersections Herndon Avenue/Fowler, and SR168/Shepherd Avenue, multimodal transportation, bicycle and pedestrian facilities, public transportation, connectivity between residential and commercial/retail uses, feasible mitigation, EV charging;
- Utilities: Costs of utility expansion, cumulative impacts.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the Project or to the location of the Project, which would reduce or avoid significant impacts and which could feasibly accomplish the basic objectives of the proposed Project. Three alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses, and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium high density residential use, 10 acres would be developed with 195 apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

Alternatives are described in detail in Chapter 5. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other Project alternatives.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Equal (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

As Table ES-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the significant effects on the environment. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed Project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations.

The environmental impacts of the proposed Project, the impact level of significance prior to mitigation, the proposed mitigation measures and/or adopted policies and standard measures that are already in place to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character.	LS	*None required.*	LS
Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway.	LS	*None required.*	LS
Impact 3.1-3: Project implementation may result in light and glare impacts.	LS	*Conditions of Approval will require compliance with the Development Standards for lighting, landscaping, and building design, which would collectively minimize the visual impacts to the greatest extent feasible as the site transitions from agricultural to urban/suburban uses.*	LS
AGRICULTURAL RESOURCES			
Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses.	LS	*None required.*	LS
Impact 3.2-2: The proposed Project has the potential to conflict with existing zoning for agricultural use, or Williamson Act Contracts.	LS	*None required.*	LS
Impact 3.2-3: The proposed Project has the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands.	LS	*None required*	LS
AIR QUALITY (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from SJVAPCD, CARB, etc.)			

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PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.3-1: Project operation would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.	LS	*Conditions of Approval will require compliance with the APCD Rules and regulations, which would collectively minimize the air quality impacts from construction and operation to the greatest extent feasible as the site transitions from agricultural to urban/suburban uses.*	LS
Impact 3.3-2: Proposed Project construction activities would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.	LS	*Conditions of Approval will require compliance with the APCD Rules and regulations, which would collectively minimize the air quality impacts from construction and operation to the greatest extent feasible as the site transitions from agricultural to urban/suburban uses.*	LS
Impact 3.3-3: The proposed Project would not generate carbon monoxide hotspot impacts.	LS	*None required.*	--
Impact 3.3-4: The proposed Project has the potential for public exposure to toxic air contaminants.	LS	*None required.*	--
Impact 3.3-5: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
BIOLOGICAL RESOURCES			
Impact 3.4-1: The proposed Project has the potential to have a direct or indirect effect on special-status invertebrate species.	LS	*None required.*	--
Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species.	LS	*None required.*	--
Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species.	PS	***Mitigation Measure 3.4-1**: The Project applicant shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:* • *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.* • *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines, based on these same considerations, that a change in buffer size would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*	LS

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Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species.	PS	***Mitigation Measure 3.4-2**: Prior to grading of each Project Development phase, the Project applicant shall conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats:* • *If removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be conducted by a qualified biologist. The surveys shall be conducted from dusk until dark.* • *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.* • *If a non-maternal roost is located, eviction and exclusion techniques shall be conducted as recommended by the qualified biologist. Methods may include opening the roosting area to change the air flow and lighting, installing one-way doors, or other appropriate methods that allow the bats to exit and find a new roost. After eviction is believed to be completed, acoustic monitoring, and an evening emergence survey shall be performed by the qualified biologist to ensure eviction is complete. For tree removal, a two-step tree removal process involving removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.*	LS
Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on candidate, sensitive, or special-status plant species.	LS	*None required.*	--

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Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters.	LS	*None required.*	--
Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community.	LS	*None required.*	--
Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors or impede the use of native wildlife nursery sites.	LS	*None required.*	--
Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan.	LS	*None required*	--
Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LS	*None required.*	--
CULTURAL AND TRIBAL RESOURCES			
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5	LS	***Mitigation Measure 3.5-1:*** *If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior's Professional Qualifications Standards for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the*	LS

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		requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement. *The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find:* • *If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately, and no agency notifications are required.* • *If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important*	

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		structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the City. • *If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations*	

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		concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.	
Impact 3.5-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries.	LS	*Reference Mitigation Measure 3.5-1*	LS
Impact 3.5-3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: 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), or a resource determined by the lead agency.	LS	*Reference Mitigation Measure 3.5-1*	LS
GEOLOGY AND SOILS			
Impact 3.6-1: The proposed Project may expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides.	LS	*None required.*	LS
Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil.	LS	*None required.*	LS

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Impact 3.6-3: The proposed project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse.	LS	*None required*	LS
Impact 3.6-4: The proposed Project has the potential to result in development 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.	LS	*None required*	LS
Impact 3.6-5: The proposed Project does not have the potential to 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	LS	*None Required.*	--
Impact 3.6-6: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	LS	***Mitigation Measure 3.6-1:*** *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*	LS
Impact 3.6-7: The proposed Project has the potential to result in the loss of availability of a locally-important mineral resource recovery site or known mineral resource of value to the region and the residents of the state.	LS	*None required.*	--

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GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from SJVAPCD, CARB, etc.)			
Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LS	*None Required.*	--
Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources.	LS	*None required.*	--
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	***Mitigation Measure 3.8-1****: Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.* ***Mitigation Measure 3.8-2***: *The Project proponent shall hire a qualified consultant to perform additional testing prior to the issuance of grading permits for construction activities in the following areas that have been deemed to have potentially hazardous conditions present:* • *The area near the three ASTs and four 55-gallon drums (see Figure 3.8-1 of the Draft EIR).* • *The areas where USTs may exist, including near the former warehouse and former residences.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		• *The soils in the area where farming equipment and above ground tanks have been used, and near the former warehouse and former residences (see Figure 3.8-1 of the Draft EIR).* • *The area near the four pole-mounted transformers (see Figure 3.8-1 of the Draft EIR).* *The intent of the additional testing is to investigate whether any of the areas, facilities, or soils contain hazardous materials. All activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The ACBM and lead shall be disposed of properly at an appropriate offsite disposal facility. If surface staining is found on the Project site, a hazardous waste specialist shall be engaged to further assess the stained area.* *Should further soil sampling be required in any stained areas, evenly distributed soil samples shall be conducted for analysis of pesticides and heavy metals. The samples shall be submitted for laboratory analysis of pesticides and heavy metals per DTSC and EPA protocols. The results of the soil sampling shall be submitted to the Fresno County Department of Public Health Environmental Health Division. If elevated levels of pesticides or heavy metals are detected during the laboratory analysis of the soils, a soil cleanup and remediation plan shall be prepared and implemented prior to the commencement of grading activities.* *Further, in the event of a future release/leak of insulating fluids from any of the four pole-mounted transformers, PG&E shall be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement.*	
Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	LS	*None required.*	--
Impact 3.8-4: The Project is not located within an airport land use plan, two miles of a public airport or public use airport and, would not result in a safety hazard for people residing or working in the project area.	LS	*None required.*	--
Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LS	*None required.*	--
Impact 3.8-6: Potential to expose people or structures to a risk of loss, injury or death from wildland fires.	LS	*None required.*	--
HYDROLOGY AND WATER QUALITY (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from FID, FMFCD, RWQCB, etc.)			
Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements.	LS	*None required.*	--
Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge.	LS	*None required.*	--
Impact 3.9-3: The proposed Project has the potential to alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding or polluted runoff.	LS	*None required.*	--
Impact 3.9-4: The proposed Project has the potential to otherwise substantially degrade water quality.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.9-5: The proposed Project would place housing or structures that could impede/redirect flows within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	LS	*None required.*	--
Impact 3.9-6: The proposed Project has the potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow.	LS	*None required.*	--
LAND USE AND POPULATION			
Impact 3.10-1: The proposed Project would not physically divide an established community.	LS	*None required.*	--
Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect.	LS	*None required.*	--
Impact 3.10-3: The proposed Project would not induce substantial population growth in an area.	LS	*None required.*	--
Impact 3.10-4: The proposed Project would not displace substantial numbers of people or existing housing.	LS	*None required.*	--
NOISE			
Impact 3.11-1: Operational Noise- The proposed Project has the potential to generate 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	PS	***Mitigation Measure 3.11-1:*** *A 6-foot-tall barrier shall be constructed along the south boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue, in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
or noise ordinance, or applicable standards of other agencies.		*warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.* ***Mitigation Measure 3.11-2:*** *The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.*	
Impact 3.11-2: Construction Noise- The proposed Project has the potential to generate 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.	PS	***Mitigation Measure 3.11-3:*** *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.* ***Mitigation Measure 3.11-4:*** *The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:* • *During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.* • *Idling equipment shall be turned off when not in use.* • *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*	LS
Impact 3.11-3: Cumulative Noise- The proposed Project has the potential to generate 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.	LS	*None required.*	--
Impact 3.11-4: The proposed Project has the potential to generate excessive groundborne vibration or groundborne noise levels.	LS	*None required.*	--
Impact 3.11-5: For a Project located within the vicinity of a private airstrip or an airport land use	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
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.			
PUBLIC SERVICES AND RECREATION			
Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities.	LS	*None required.*	--
Impact 3.12-5: The proposed Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-6: The proposed Project has the potential to 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.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1: Project implementation would not result in VMT increases that are greater than 87 percent of Baseline conditions.	PS	*Implement Project Design Measures.*	SU
Impact 3.13-2: Project implementation may conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities.	LS	*None required.*	--
Impact 3.13-3: Project implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access.	LS	*None required.*	--
UTILITIES (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from FID, FMFCD, RWQCB, etc.)			
Impact 3.14-1: The proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments.	LS	*None required.*	--
Impact 3.14-2: The proposed Project would not require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects.	LS	*None required.*	--
Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new water treatment facilities or expansion of existing water facilities, the construction of which could cause significant environmental effects.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.14-4: The proposed Project does not have the potential to have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years.	LS	*None required.*	--
Impact 3.14-5: The proposed Project has the potential to require or result in the construction of new stormwater drainage facilities, the construction of which could cause significant environmental effects.	LS	*None required.*	--
Impact 3.14-6: The proposed Project has the potential to be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and comply with federal, State, and local statutes and regulations related to solid waste.	LS	*None required.*	--
CUMULATIVE IMPACTS			
Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region	LS and LCC	*None required.*	--
Impact 4.2: Cumulative Damage to Scenic Resources within a State Scenic Highway	LS and LCC	*None required.*	--
Impact 4.3: Cumulative Impact on Light and Glare	LS and LCC	*None required.*	--
Impact 4.4: Cumulative Impact on Agricultural Resources	LS and LCC	*None required.*	--
Impact 4.5: Cumulative Impact on the Region's Air Quality	LS and LCC	*None required.*	--
Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	LS and LCC	*None required.*	--
Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources	LS and LCC	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 4.8: Cumulative Impact on Geologic and Soils Resources	LS and LCC	*None required.*	--
Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions	LS and LCC	*None required.*	--
Impact 4.10: Cumulative Impact on the Inefficient, Wasteful, or Unnecessary Use of Energy Resources	LS and LCC	*None required.*	--
Impact 4.11: Cumulative Impact Related to Hazards and Hazardous Materials	LS and LCC	*None required.*	--
Impact 4.12: Cumulative Increases in Peak Stormwater Runoff from the Project site	LS and LCC	*None required.*	--
Impact 4.13: Cumulative Impacts Related to Degradation of Water Quality	LS and LCC	*None required.*	--
Impact 4.14: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge	LS and LCC	*None required.*	--
Impact 4.15: Cumulative Impacts Related to Flooding	LS and LCC	*None required.*	--
Impact 4.16: Cumulative Impact on Communities and Local Land Uses	LS and LCC	*None required.*	--
Impact 4.17: Cumulative Impacts on Population and Housing	LS and LCC	*None required.*	--
Impact 4.18: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development	LS and LCC	*None required.*	--
Impact 4.19: Cumulative Impact on Public Services and Recreation	LS and LCC	*None required.*	--
Impact 4.20: Under Cumulative conditions, Project implementation would not result in VMT increases that are greater than 87 percent of Baseline conditions	PS	*Implement Project Design measures.*	CC and SU
Impact 4.21: Under Cumulative conditions, the proposed Project would not conflict with a	LS and LCC	*None required.*	--

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PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities, or increase hazards due to a design feature, incompatible uses, or inadequate emergency access			
Impact 4.22: Cumulative Impact on Wastewater Utilities	LS and LCC	*None required.*	--
Impact 4.23: Cumulative Impact on Water Utilities	LS and LCC	*None required.*	--
Impact 4.24: Cumulative Impact on Stormwater Facilities	LS and LCC	*None required.*	--
Impact 4.25: Cumulative Impact on Solid Waste Facilities	LS and LCC	*None required.*	--
Impact 4.26: Cumulative Impact from Electrical, Natural Gas, or Telecommunications Facilities	LS and LCC	*None required.*	--

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1.1 PURPOSE AND INTENDED USES OF THE EIR

The City of Clovis, as the lead agency, determined that the proposed Shepherd North Project is a "project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

The City of Clovis, as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the proposed Project. This EIR will be used by the City of Clovis to determine whether to approve, modify, or deny the proposed Project and associated approvals in light of the Project's environmental effects. The EIR will be used as the primary environmental document to evaluate full development, all associated infrastructure improvements, and permitting actions associated with the proposed Project. All of the actions and components of the proposed Project are described in detail in Chapter 2.0, Project Description.

1.2 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR, which is described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation."

1.3 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the proposed Project or an aspect of the proposed Project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). The following agencies are considered "Responsible Agencies" or "Trustee

Agencies" for the proposed Project, and may be required to issue permits or approve certain aspects of the proposed Project:

- Fresno Local Agency Formation Commission (LAFCo) – SOI Amendment, Annexation, and Detachment from the Fresno County Fire Protection District and the Kings River Conservation District;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – Review of stormwater facilities, grading, and street improvements.

1.4 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION

The City of Clovis circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 9, 2022 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held on May 25, 2022 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and comments received on the NOP by interested parties are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the proposed Project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Clovis will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period. Additionally, the City of Clovis will file the Notice of Availability with the County Clerk and have it published in a newspaper of regional circulation to begin the local public review period.

PUBLIC NOTICE/PUBLIC REVIEW

The City of Clovis will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Attn: George González, MPA | Senior Planner
City of Clovis | Planning Division
1033 Fifth Street
Clovis, CA 93612
Phone: 559.324.2383
Email: georgeg@cityofclovis.com

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and

2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed Project in contemplation of environmental considerations.

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. The Guidelines state as follows:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

Following review and consideration of the Final EIR, the City may take action to approve, modify, or reject the Project. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines

Section 15097 for mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during Project implementation, in a manner that is consistent with the EIR.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the proposed Project, environmental and planning documentation prepared for recent projects located within the City of Clovis, applicable local and regional planning documents, and responses to the Notice of Preparation (NOP).

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

This Executive Summary summarizes the characteristics of the proposed Project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the proposed Project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed Project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, and identifies the scope and organization of the Draft EIR.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed Project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, related improvements, and a list of related agency action requirements.

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the proposed Project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Geology, Soils, and Minerals
- Greenhouse Gases, Climate Change, and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use, Population, and Housing
- Noise
- Public Services and Recreation
- Transportation and Circulation
- Utilities
- Wildfire

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed Project, which could feasibly attain the basic objectives of the proposed Project and avoid and/or lessen any significant environmental effects of the proposed Project. Chapter 5.0 provides a comparative analysis between the environmental impacts of the proposed Project and the selected alternatives.

CHAPTER 6 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as technical material prepared to support the analysis.

1.6 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Clovis received eleven (11) written comment letters on the NOP for the proposed Project. Copies of the letters is provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below. The City also held a public scoping meeting on May 25, 2022.

1. Native American Heritage Commission (May 10, 2022)
2. Department of Toxic Substances Control (May 18, 2022)
3. Robert Shuman (May 25, 2022)
4. Jared Callister (May 25, 2022)
5. State Water Resources Control Board (June 6, 2022)
6. California Department of Conservation (May 26, 2022)
7. County of Fresno (June 2, 2022)
8. Fresno Irrigation District (June 7, 2022)
9. Fresno Metropolitan Flood Control District (June 10, 2022)
10. California Department of Transportation (June 10, 2022)
11. San Joaquin Valley Air Pollution Control District (June 10, 2022)

1.7 POTENTIAL AREAS OF CONCERN

The following are topics of public concern or potential controversy that have become known to the City staff based on public input, known regional issues, and staff observations:

- Agricultural: conversion of farmland, impacts to adjacent farmland, cumulative loss of farmland, compatibility with Williamson Act contracts, impacts on agricultural operations, mitigation measures for agricultural impacts;
- Air Quality/Greenhouse Gas Emissions/Energy: project related air emissions, construction emissions, operations emissions, quantification of emissions, health risk screening/assessment, ambient air quality, emissions reduction, vegetation barriers/urban greening, clean lawn/garden equipment, District rules/regulations,
- Biological: Swainson's hawk and other raptors;
- Hazards/Hazardous Materials: Use or storage of hazardous materials and wastes, underground petroleum storage tanks, protection of groundwater, proper destruction of wells and septic tanks, appropriate construction equipment operations and maintenance,
- Hydrology/Water Supply Concerns: well water recharge/groundwater, irrigation, water supply; non-potable water supply, flood control/drainage, impervious surfaces, storm drainage easements;
- Land Use and Planning: Affordable housing;
- Noise: Compliance with the Noise Element, elevated noise levels;

- Traffic: Need for a traffic study, additional traffic, need for street improvements, need for improvements on internal roads and access to Fowler/Behymer; vehicle miles traveled, intersections Herndon Avenue/Fowler, and SR168/Shepherd Avenue, multimodal transportation, bicycle and pedestrian facilities, public transportation, connectivity between residential and commercial/retail uses, feasible mitigation, EV charging;
- Utilities: Costs of utility expansion, cumulative impacts.

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2.1 PROJECT LOCATION

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-3 illustrates the Annexation Area.

2.2 PROJECT SITE DEFINED

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

2.3 PROJECT SETTING

EXISTING SITE CONDITIONS

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs), as depicted in Figure 2.0-5.

SITE TOPOGRAPHY

The Project site is relatively flat and is approximately 385 feet above mean sea level. Reference is made to Figure 2.0-4. USGS Topographic Map.

EXISTING SITE USES

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the

[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site', throughout this EIR.

southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Figure 2.0-6 provides an aerial map of the Project site.

EXISTING SURROUNDING USES

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

EXISTING GENERAL PLAN LAND USE DESIGNATIONS AND ZONING

The following section outlines the City and County General Plan land use designations and zoning for the Project site. The Project site is currently outside of the jurisdiction of the City of Clovis, and therefore does not have a City of Clovis zoning designation.

City of Clovis

The City of Clovis General Plan was adopted on August 25, 2014. Figure 2.0-7 depicts the land use designations for the Project site and the surrounding areas under the adopted City of Clovis General Plan. The Project site is designated as Rural Residential (RR) under the City of Clovis General Plan.

Rural Residential (RR): Very low-density residential uses and small-scale agricultural operations. Rural residential uses may be dispersed uniformly across the land or be sited so to leave more acreage for

orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

Fresno County

Figure 2.0-8 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area. The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map and is zoned AL-20 (Limited Agricultural) by the County. This land use designation is an urban holding land use designation by Fresno County.

The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map and is zoned RR (Rural Residential) by the County. This land use designation is an urban land use designation. . At the time Fresno County created the Rural Residential land use designation and assigned that land use designation to areas within the county, the Fresno County General Plan was segregated into two segments; *Non Intensive* and *Intensive,* development polices. The Fresno County General Plan *Non Intensive* section defines county goals and polices regarding agriculture, open space and riverine area protection, mineral extraction, etc. Whereas the *Intensive* section of the plan defines County goals and policies regarding residential development, directing urban development to cites, lands in city fringe areas as well as unincorporated communities.

The Development Area is bounded on the north and east by *Rural Residential* developments classified as *Intensive* development in the County General Plan. To the west and south are *Low Density Residential* uses. The Development Area is an island surrounded by *Intensive* development.

2.4 PROJECT GOALS AND OBJECTIVES

A clear statement of objectives and the underlying purpose of the proposed Project are discussed per CEQA Guidelines Section 151024(b).

PROJECT OBJECTIVES

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.

- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).

- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.

- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.

- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

2.5 PROJECT ENTITLEMENTS

GENERAL PLAN AMENDMENT

The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density.

- **Medium High Density (MH).** This designation identifies areas appropriate small lot single family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre.

The proposed General Plan land use designations for the Project site is shown on Figure 2.0-9.

PRE-ZONING

The Project site is currently located outside of the Clovis city limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Uses):

Development Area: The pre-zoning request is for R-1-PRD zoning designations over these lots.

- **Single-Family Planned Residential Development Zoning (R-1-PRD).** This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designations of the General Plan.

The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-10.

TENTATIVE SUBDIVISION MAP

The proposed Project includes a Tentative Subdivision Map for the Development Area that is planned for development in phases. The Tentative Map covers approximately 77 acres within three Assessor parcels (APNs); 557-021-20, -19, and -21.

The Tentative Subdivision Map will result in the subdivision of a total of approximately 77 acres into up to 605 single-family residential units, with an additional 52 out lots for roads, utilities, greenspace, landscaping, and pedestrian paths. The Project objectives also include the installation of new public roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping.

PLANNED DEVELOPMENT PERMIT

The proposed Project includes a Planned Development Permit (PDP) for the Development Area of the Project, which will incorporate a program of enhanced amenities (e.g., additional open space, park improvements and/or trail development). The PDP may allow for modifications to the applicable development standards, such as lot coverage, setbacks and building heights.

Figure 2.0-11a, 2.0-11b, and 2.0-11c illustrate the proposed site plans for the Development Area.

ANNEXATION/REORGANIZATION

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This acreage includes the Development Area.

RESIDENTIAL SITE PLAN REVIEW

The proposed Project includes a Residential Site Plan Review (RSPR) for the Development Area as a condition of a subdivision map implementing provisions of zoning.

SPHERE OF INFLUENCE EXPANSION

The proposed Project includes an amendment of the City's SOI to include the entirety of the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno Local Agency Formation Commission (LAFCO) and the County of Fresno.

2.6 DEVELOPMENT PROJECT CHARACTERISTICS

The proposed Project is primarily a residential development anticipated to provide up to 605 residential units. The Development Project would provide open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. Other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, other pedestrian facilities, private parking, street lighting, and street signage.

Housing development will depend on market conditions and demand. The plan for infrastructure allows for development to occur in phases to respond to the market conditions and demand.

RESIDENTIAL DEVELOPMENT

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area is planned to include the development of up to 101 single-family residences with lot sizes ranging from approximately 5,400 square feet to 15,900 square feet. The southern portion of the Development Area is planned for smaller lot single-family residences, with lot sizes ranging from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,500 square feet. Figure 2.0-11a, 2.0-11b and 2.0-11c illustrate the Project site plans.

GREENSPACE

The proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks . The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south.

CIRCULATION

The proposed Project includes a hierarchy of roadways to accommodate the capacity needs of the existing street network as well as provide additional vehicular access to the Development Area. North Sunnyside Avenue and East Shepherd Avenue are the main arterial roadways providing access to the Development Area.

The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. Sidewalks will also be included per the City standards.

UTILITIES AND PLANNED INFRASTRUCTURE IMPROVEMENTS

The construction of on-site infrastructure improvements would be required to accommodate development of the Development Area, as described below.

Water System

The Project site will be served by a new potable and non-potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and

Central Valley Project. The City's Water Reuse Facility produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

Wastewater System

The Project site will be served by a new wastewater collection system installed within proposed public utilities easements. The proposed wastewater conveyance facilities will connect to the existing sewer mains as part of the City of Clovis collection and treatment system. Wastewater treatment will be provided at the existing Fresno-Clovis Regional Wastewater Treatment Plant in the City of Fresno. By agreement with the City of Fresno, the City of Clovis is entitled to a maximum capacity of 9.3 million gallons per day (mgd). The Fresno-Clovis Regional Wastewater Treatment Plant has a maximum capacity of 80 mgd and is owned by Fresno and Clovis, and is operated by the City of Fresno. If required, the City has the capability to acquire additional capacity at the Wastewater Treatment Plant. Wastewater treatment will also be provided by the City's Water Reuse Facility. The plant serves the new growth areas of the City in the southeast, northwest, and ultimately the northeast urban centers. The plant is designed to accommodate future expansion and will ultimately treat 8.4 mgd.

Storm Drainage

The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's basins.

Regulated Public Utilities

Electrical, provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along E. Shepherd Avenue and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

2.7 ALTERNATIVES

Four alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following four alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses, and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium high density residential use, 10 acres would be developed with 195

apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.

- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future if desired by those residents.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

INCREASED DENSITY MIXED USE ALTERNATIVE

Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 80 percent of the Development Area (62 acres) would be developed with 605 residential units (9.75 du/ac). This would still fall under the Medium High Density (MH) 7.1–15.0 du/ac land use category. The remaining 15 acres of the Development Area would be developed with a mix of commercial and higher density residential. The mixed-use area would have 10 acres for High Density (H) 15.1–25.0 du/ac. The alternative assumes 195 apartments constructed at a density of 19.5 du/ac. There would also be 5 acres of Neighborhood Commercial (NC) (Max FAR 0.50). This area would be developed as a neighborhood-scale shopping facility. The FAR would allow for 108,000 square feet of commercial. It is anticipated that the commercial would include an anchor store such as a small supermarket with a wide range of ancillary uses including banks, restaurants, service businesses, and other related activities are generally found in these planned commercial centers.

REDUCED DENSITY ALTERNATIVE

Under this alternative, the proposed Project would have a reduced density in the Development Area that would fall under the Very Low Density (VL) 0.6–2.0 du/ac land use. The alternative assumes 150 residential units at approximately 2 du/ac. This use is described as large lot single family residences and appurtenant structures within an identifiable residential neighborhood. This alternative would include neighborhood parks and all the infrastructure necessary to connect to City services.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Under this alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area. Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate that possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

2.8 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

CITY OF CLOVIS

The City of Clovis will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Clovis General Plan Amendment (Land Use Element);
- Approval of City of Clovis Zoning Pre-zoning;
- Approval of Residential Site Plan Review;
- Approval of Vesting Tentative Tract Maps;
- Approval of Planned Development Permit;
- Approval of SOI Expansion and Authorization to submit SOI Amendment request to Fresno LAFCo and County of Fresno;
- Approval of Annexation of the Development Area and Inhabited Area and Authorization to submit Annexation request to Fresno LAFCo and County of Fresno;
- Approval of future Final Maps;
- Approval of future Planned Development Permit;
- Approval of future Grading Plans;
- City review, approval, of construction and utility plans; and
- Approval of future Building Permits.

OTHER GOVERNMENTAL AGENCY APPROVALS

The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approval include, but are not limited to, the following:

- Fresno Local Agency Formation Commission (LAFCo) – SOI Amendment, Annexation, and Detachment from the Fresno County Fire Protection District and the Kings River Conservation District;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities, grading, and street improvements.

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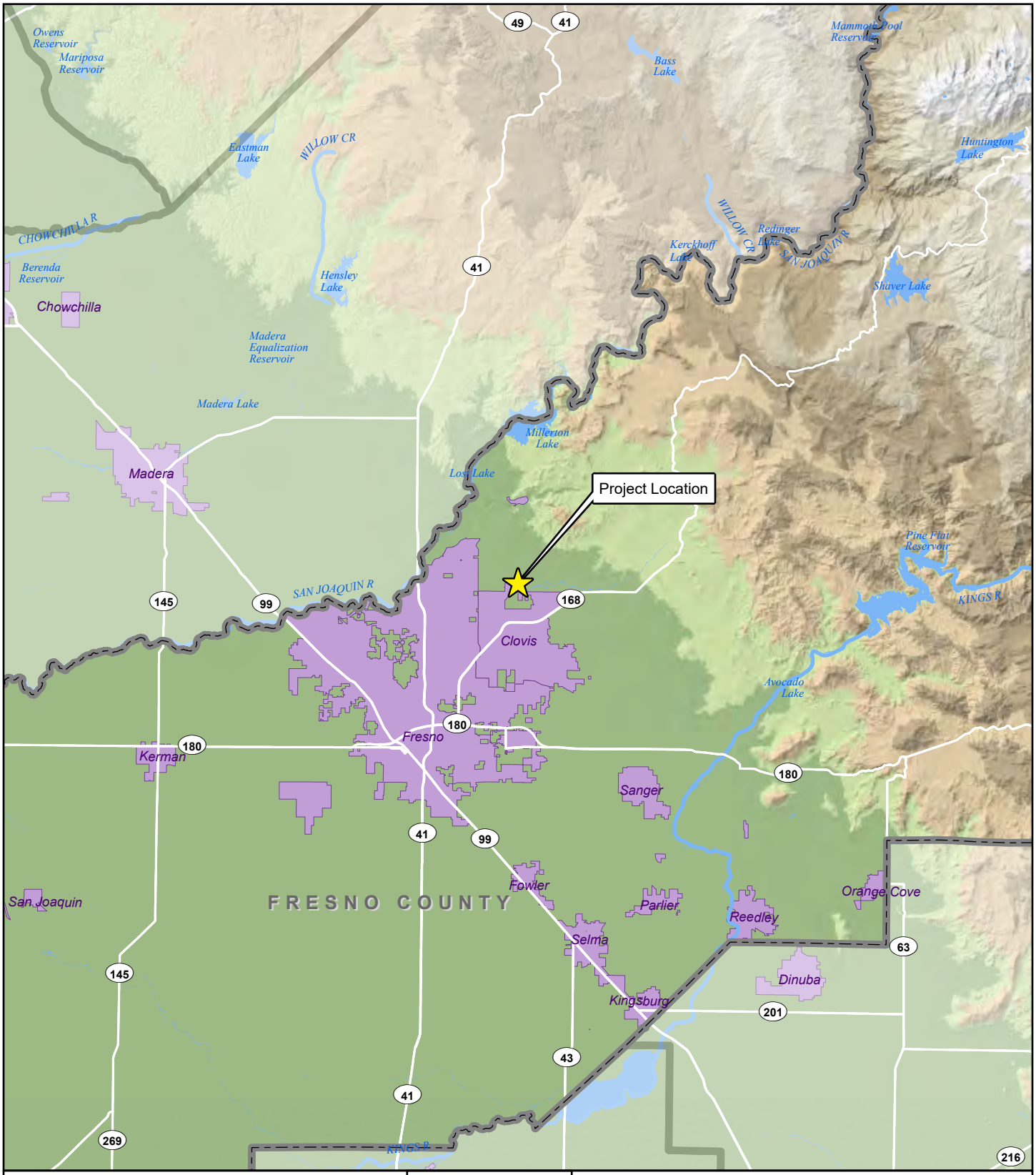
Project Location
FRESNO COUNTY
Owens Reservoir
Mariposa Reservoir
Eastman Lake
WILLOW CR
CHOWCHILLA R
Berenda Reservoir
Chowchilla
Hensley Lake
Madera Equalization Reservoir
Madera Lake
Madera
Millerton Lake
Lost Lake
Bass Lake
Mammoth Pool Reservoir
Huntington Lake
Kerckhoff Lake
Redinger Lake
SAN JOAQUIN R
Shaver Lake
Pine Flat Reservoir
KINGS R
Clovis
Fresno
Kerman
Sanger
Avocado Lake
San Joaquin
Fowler
Parlier
Reedley
Orange Cove
Selma
Dinuba
Kingsburg
49
41
99
168
145
180
63
201
43
269
216
LEGEND
Incorporated Area
Fresno County
California Counties
N
0
2½
5
Miles
SHEPHERD NORTH PROJECT
Figure 2.0-1. Regional Location
Sources: Fresno County GIS. Map date: May 8, 2023.
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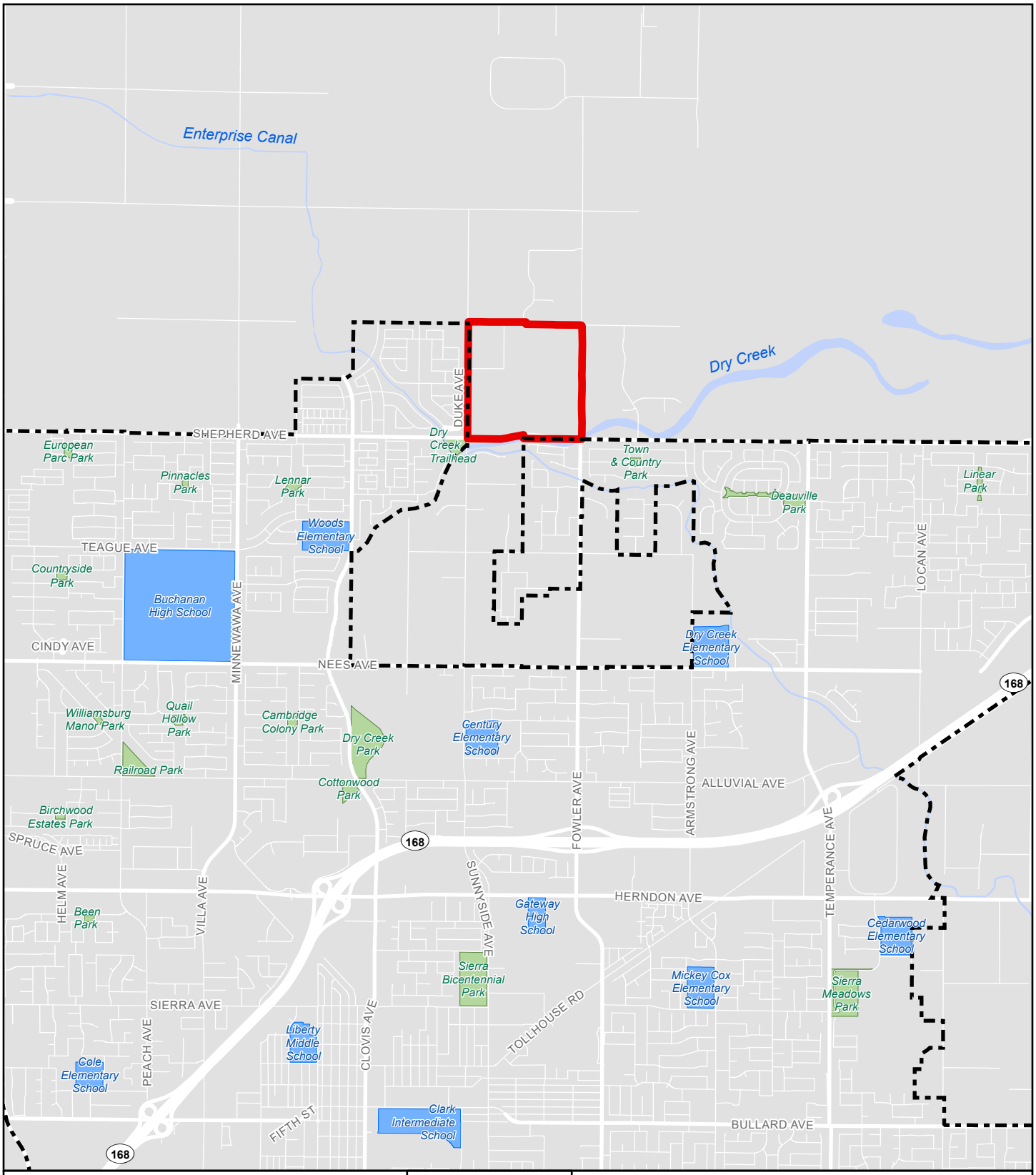
Enterprise Canal
Dry Creek
SHEPHERD AVE
DUKE AVE
Dry Creek Trailhead
European Parc Park
Pinnacles Park
Lennar Park
Woods Elementary School
Town & Country Park
Deauville Park
Linear Park
LOCAN AVE
TEAGUE AVE
Countryside Park
Buchanan High School
MINNEWAWA AVE
CINDY AVE
NEES AVE
Dry Creek Elementary School
168
Williamsburg Manor Park
Quail Hollow Park
Cambridge Colony Park
Dry Creek Park
Century Elementary School
Railroad Park
Cottonwood Park
ALLUVIAL AVE
ARMSTRONG AVE
FOWLER AVE
Birchwood Estates Park
SPRUCE AVE
HELM AVE
Been Park
VILLA AVE
SUNNYSIDE AVE
Gateway High School
HERNDON AVE
TEMPERANCE AVE
Cedarwood Elementary School
Sierra Bicentennial Park
Mickey Cox Elementary School
Sierra Meadows Park
SIERRA AVE
PEACH AVE
Liberty Middle School
CLOVIS AVE
TOLLHOUSE RD
Cole Elementary School
FIFTH ST
Clark Intermediate School
BULLARD AVE
168
LEGEND
Project Boundary
Clovis City Limits
Park
School
Sources: Fresno County GIS. Map date: May 8, 2023.
N
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SHEPHERD NORTH PROJECT
Figure 2.0-2. Vicinity Map
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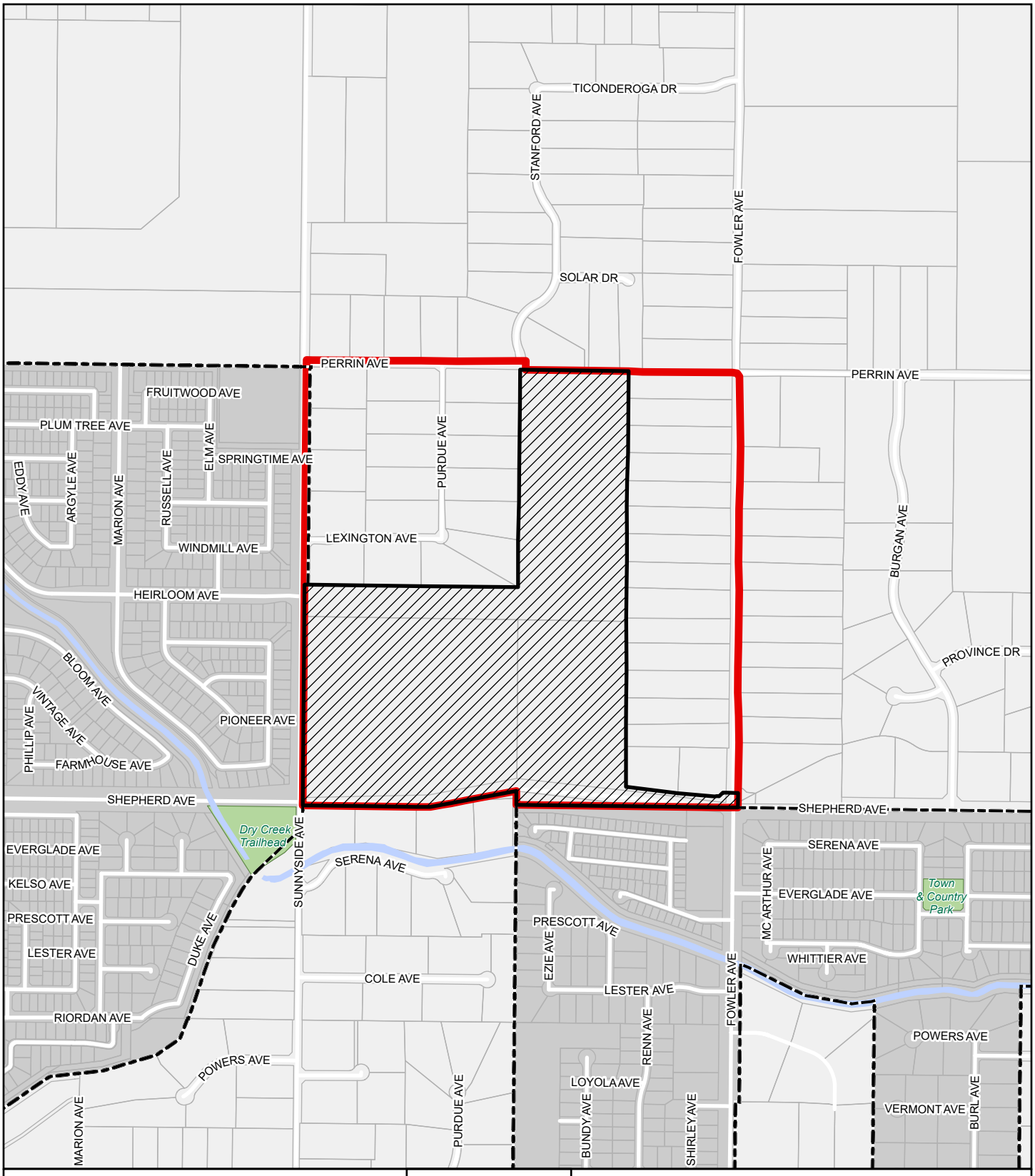

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

N

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Feet

SHEPHERD NORTH PROJECT

Figure 2.0-3. Annexation Map

Sources: Fresno County GIS. Map date: May 8, 2023.

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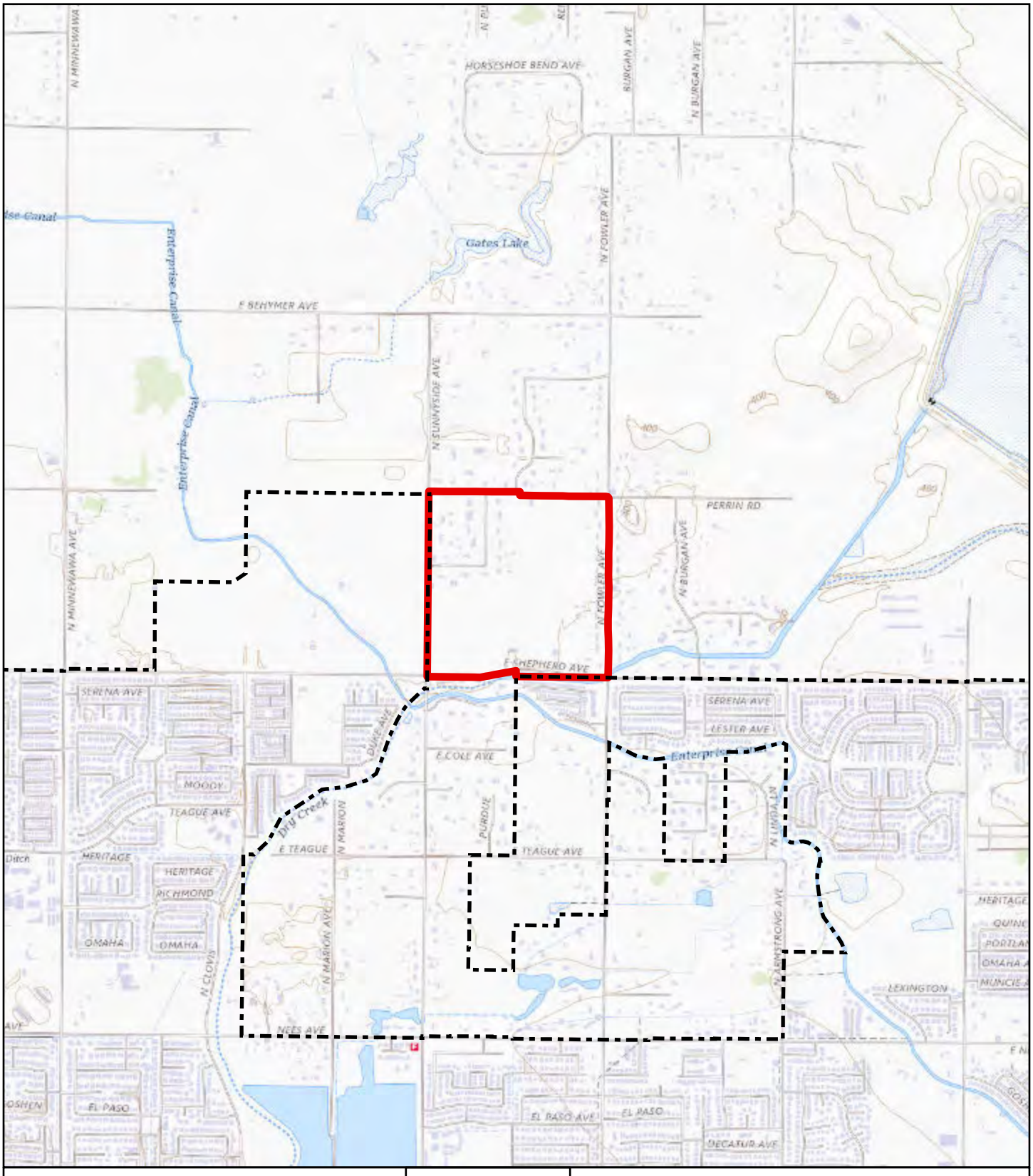

LEGEND

- Project Boundary
- Clovis City Limits

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Feet

SHEPHERD NORTH PROJECT

Figure 2.0-4. USGS Topographic Map

Sources: Fresno County GIS; ArcGIS Online USGS Topographic Map Service.
Map date: May 8, 2023.

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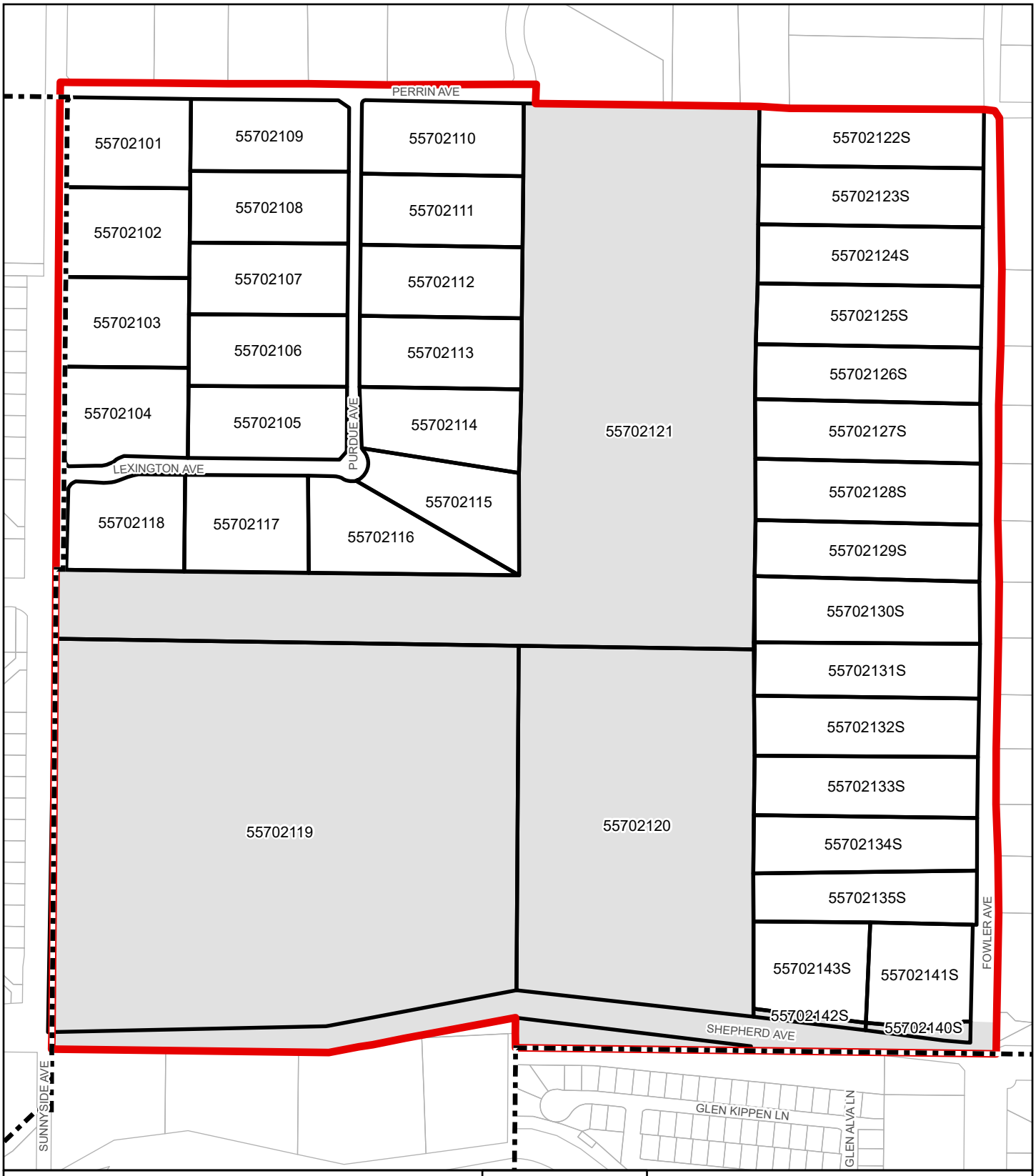

LEGEND

- Project Parcel
- Project Boundary
- Clovis City Limits
- Developement Area

N

0 100 200

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-5. Accessor Parcel Map

Sources: Fresno County GIS. Map date: May 8, 2023.

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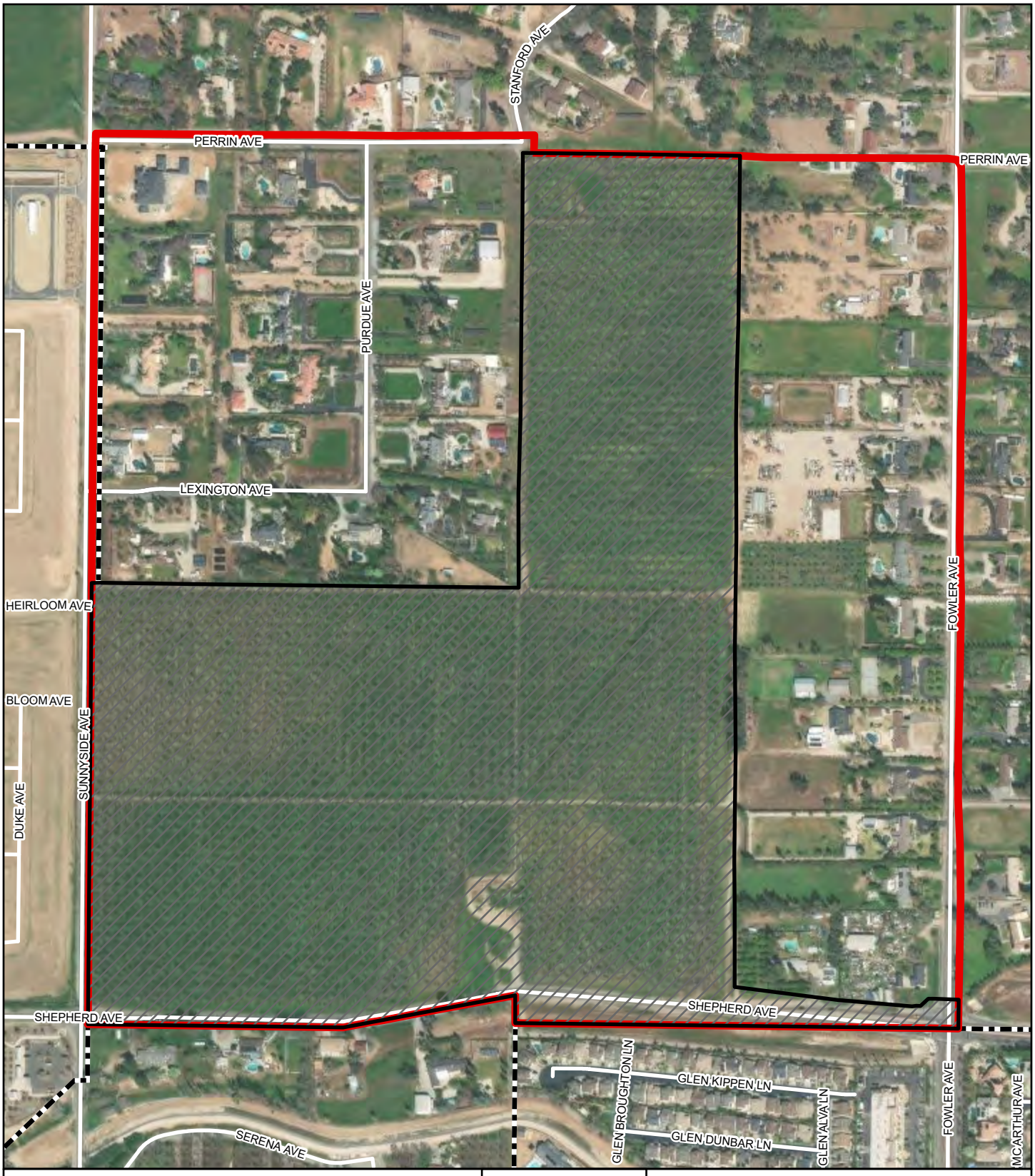

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

N

0 100 200

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-6. Aerial of Project Site

Sources: Fresno County GIS; ArcGIS Online World Imagery Map Service(04/08/2022).
Map date: May 8, 2023.

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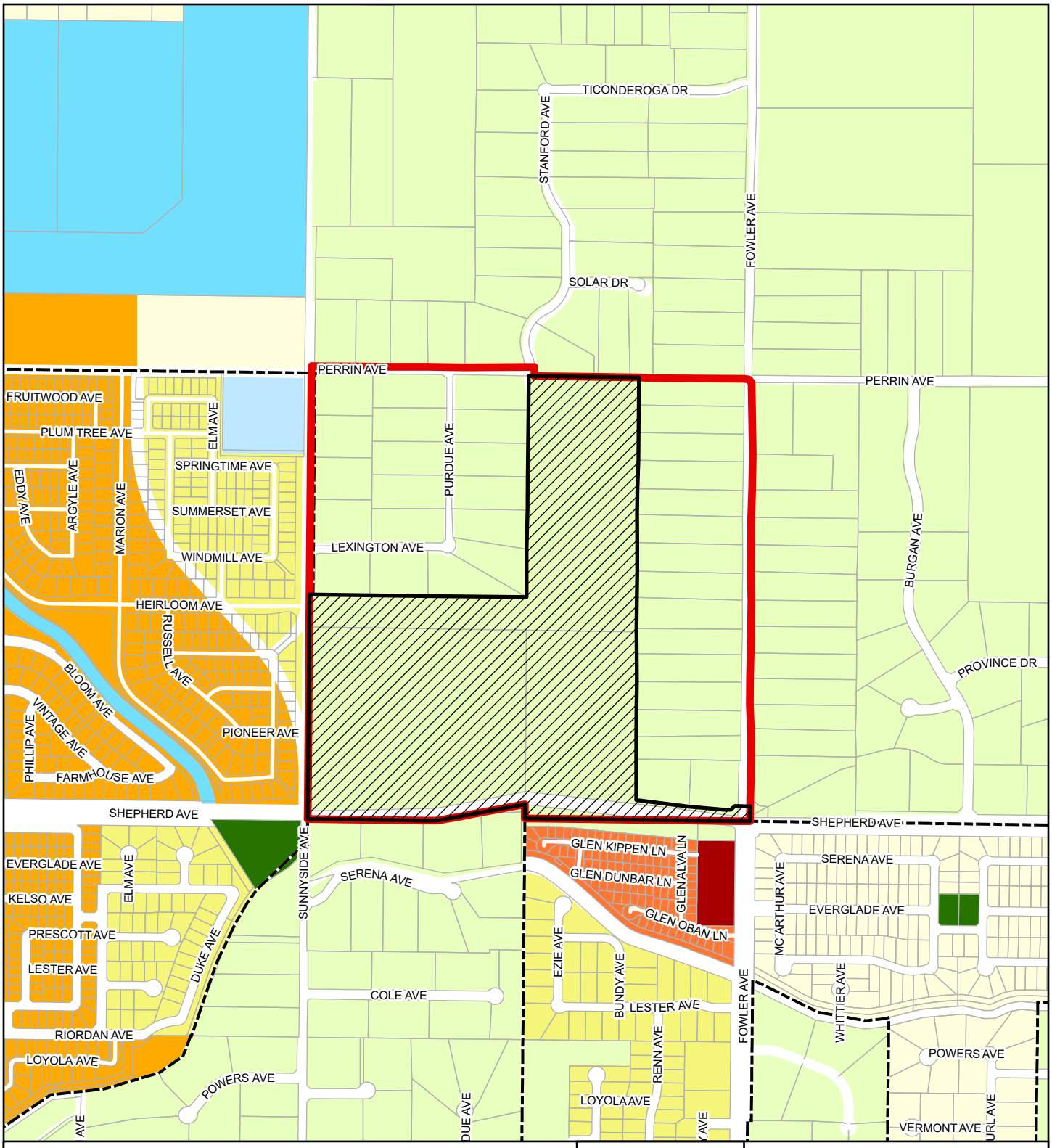

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

City of Clovis General Plan Land Use

- RR: Rural Residential
- VL: Very Low Density Residential
- L: Low Density Residential
- M: Medium Density Residential
- MH: Medium High Density Residential
- GC: General Commercial
- P: Public/Quasi-Public Facilities
- PK: Park
- W: Water

N

0 200 400

Feet

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-7. City of Clovis General Plan Land Use Designations

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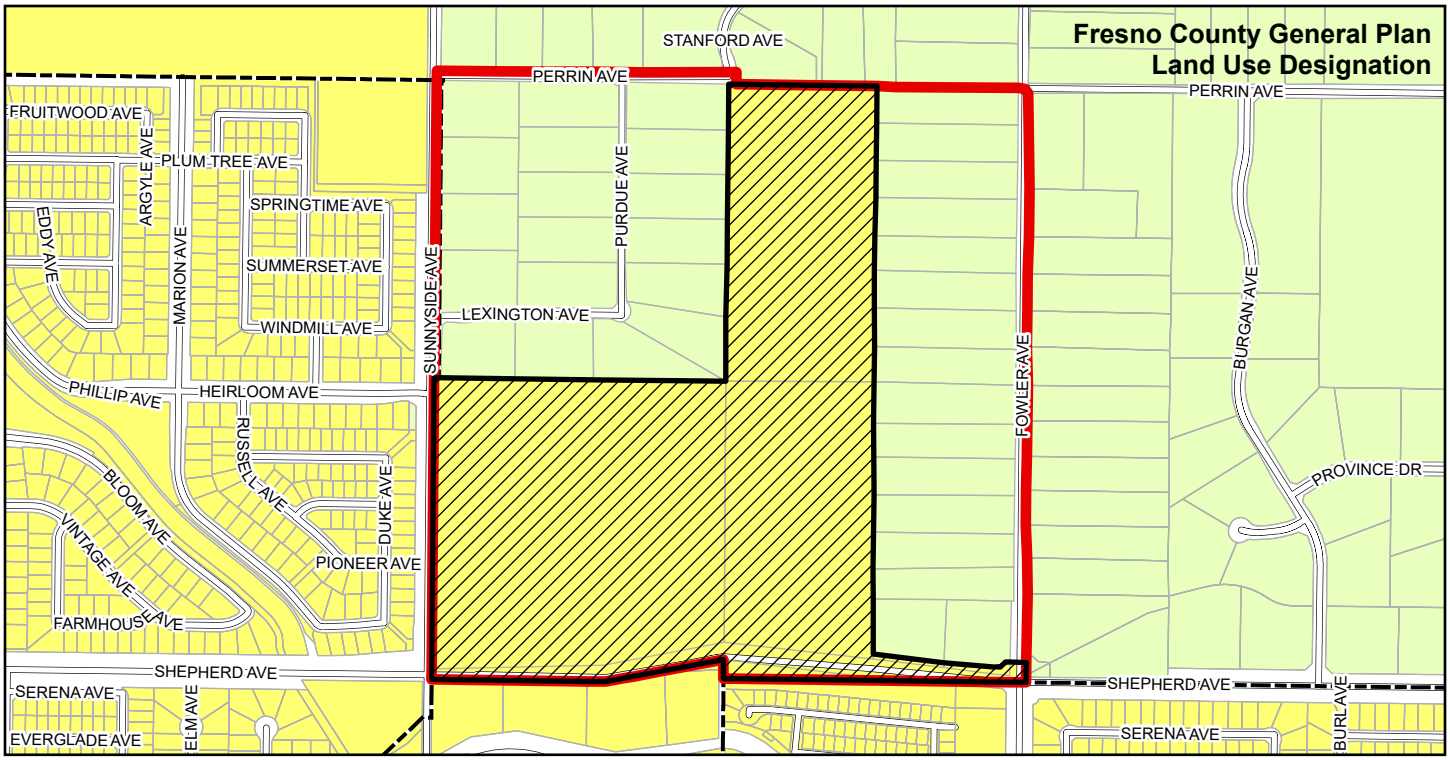

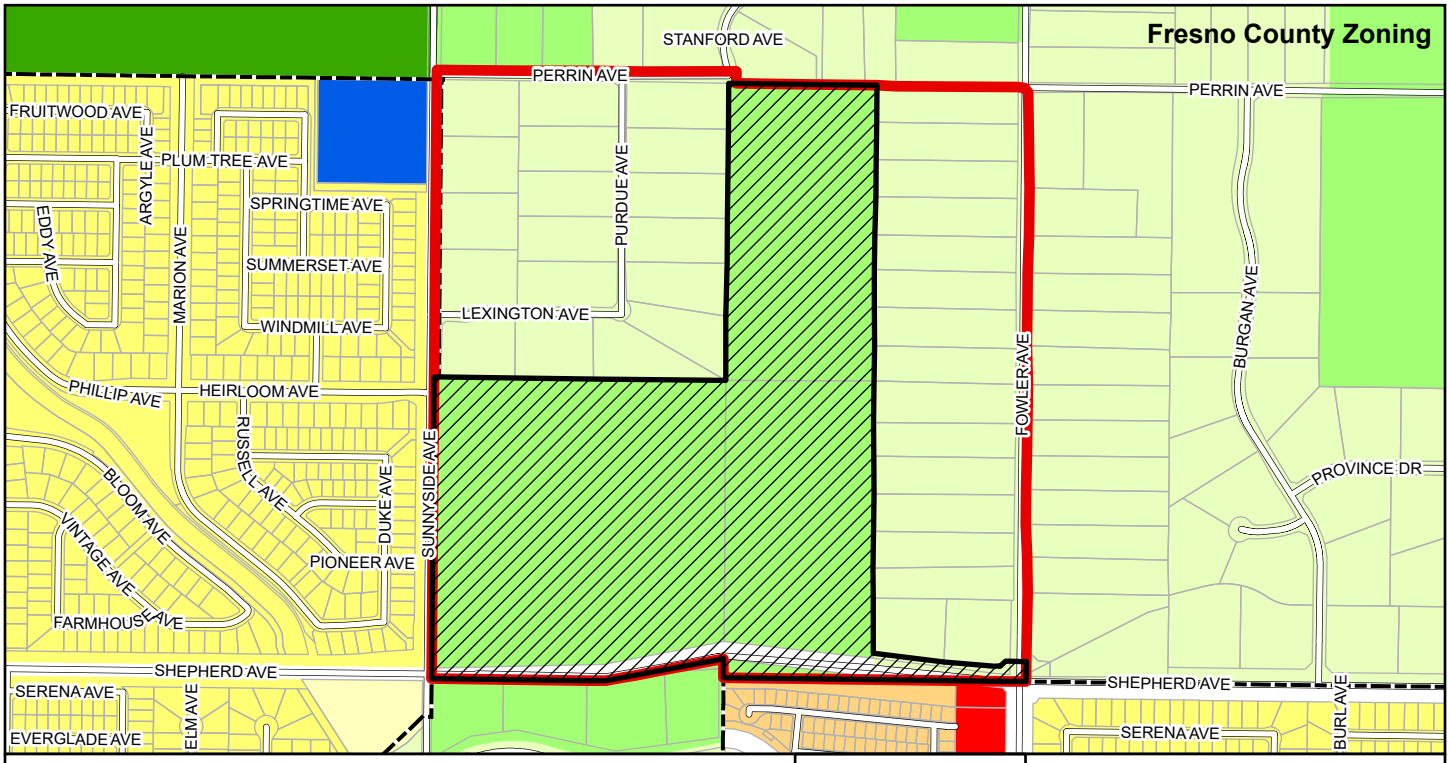

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

Fresno County General Plan Land Use

- Rural Residential
- Low Density Residential

Fresno County Zoning

- AE20
- AL20
- C-2
- P-F
- R-1
- R-1-7500
- R-1-PRD
- R-2
- R-A
- RR

N

0 200 400

Feet

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-8. Fresno County General Plan Land Use and Zoning Designations

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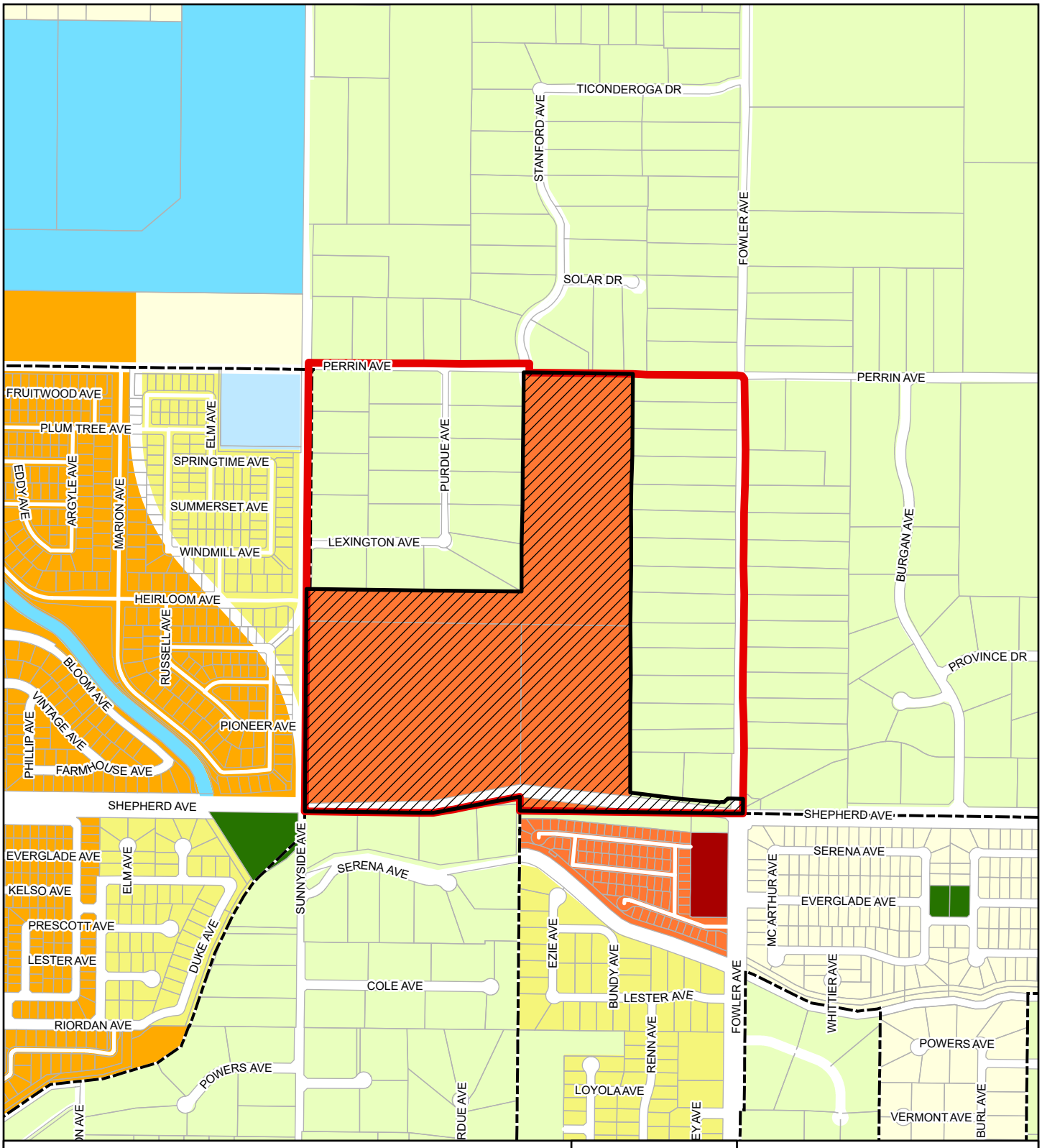

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

City of Clovis General Plan Land Use

- RR: Rural Residential
- VL: Very Low Density Residential
- L: Low Density Residential
- M: Medium Density Residential
- MH: Medium High Density Residential
- GC: General Commercial
- P: Public/Quasi-Public Facilities
- PK: Park
- W: Water

N

0 200 400

Feet

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-9. Proposed General Plan Land Use Designations

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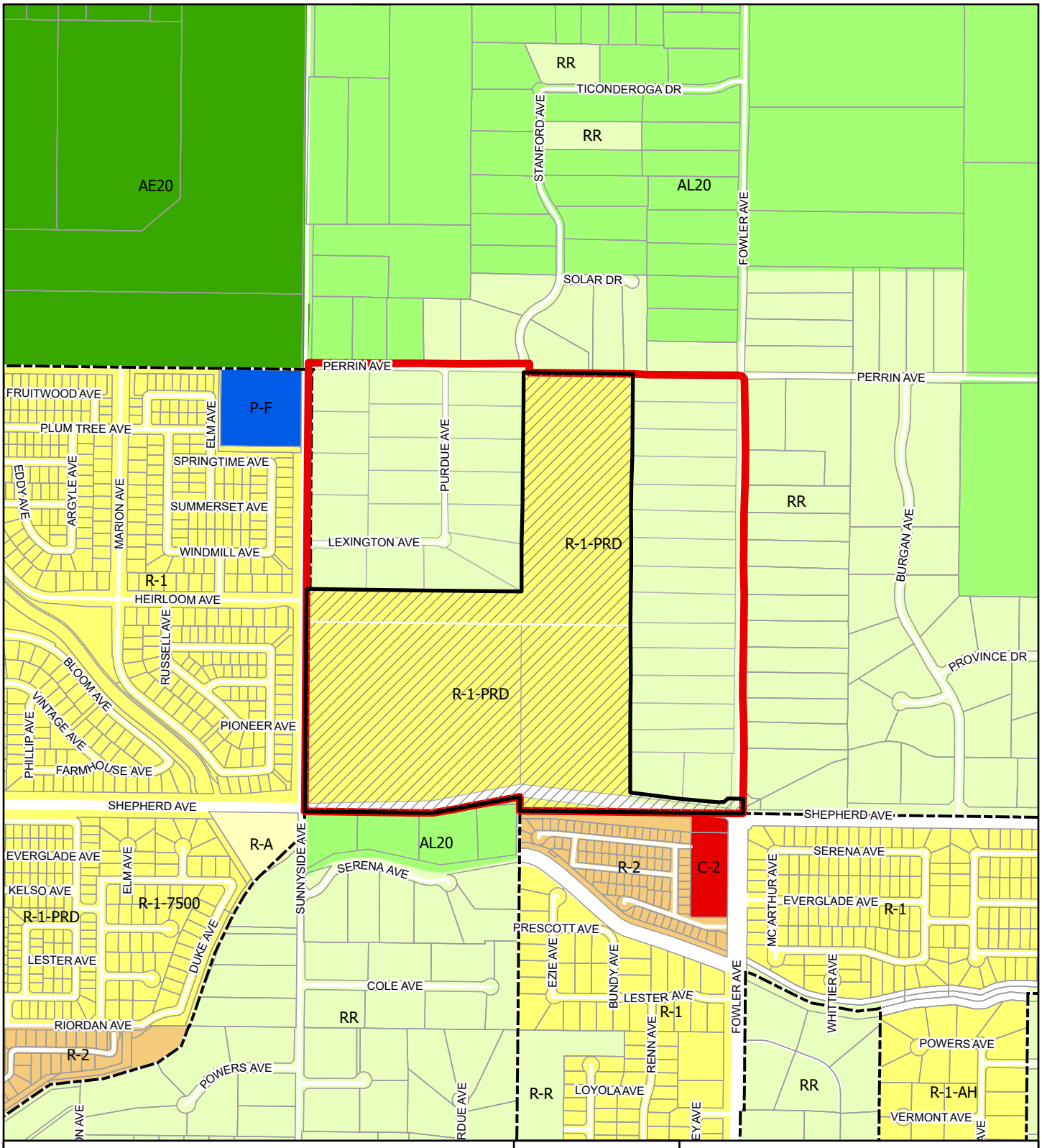

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

City of Clovis Zoning

- C-2
- P-F
- R-1
- R-1-7500
- R-1-AH
- R-1-PRD
- R-2
- R-A
- R-R

Fresno County Zoning

- AE20
- AL20
- R-R

N

0 200 400

Feet

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-10. Proposed Zoning

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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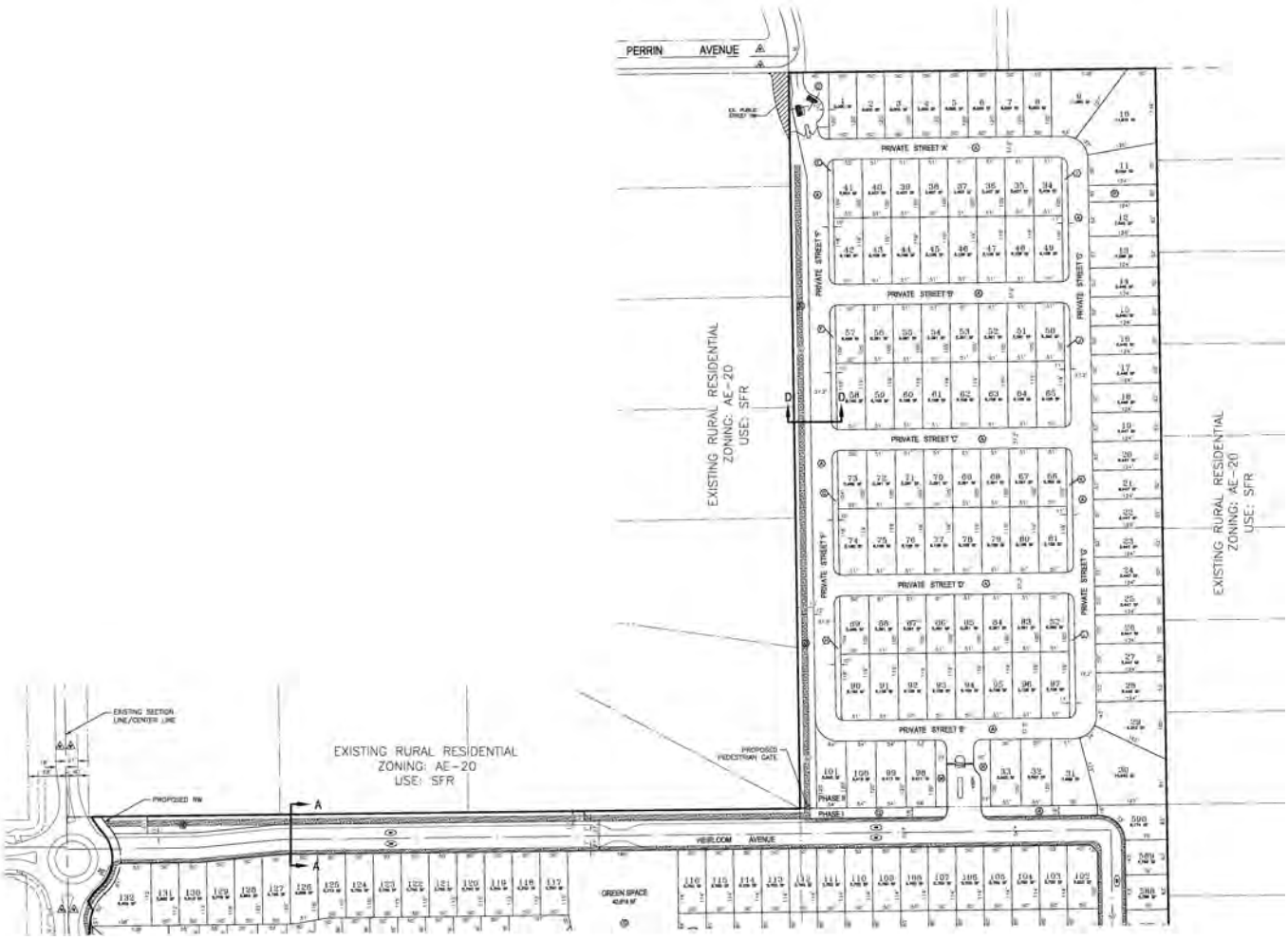

SHEPHERD NORTH PROJECT

Figure 2.0-11a. Tentative Subdivision Map North

Sources: Harbour Associates. Map date: May 8, 2023.

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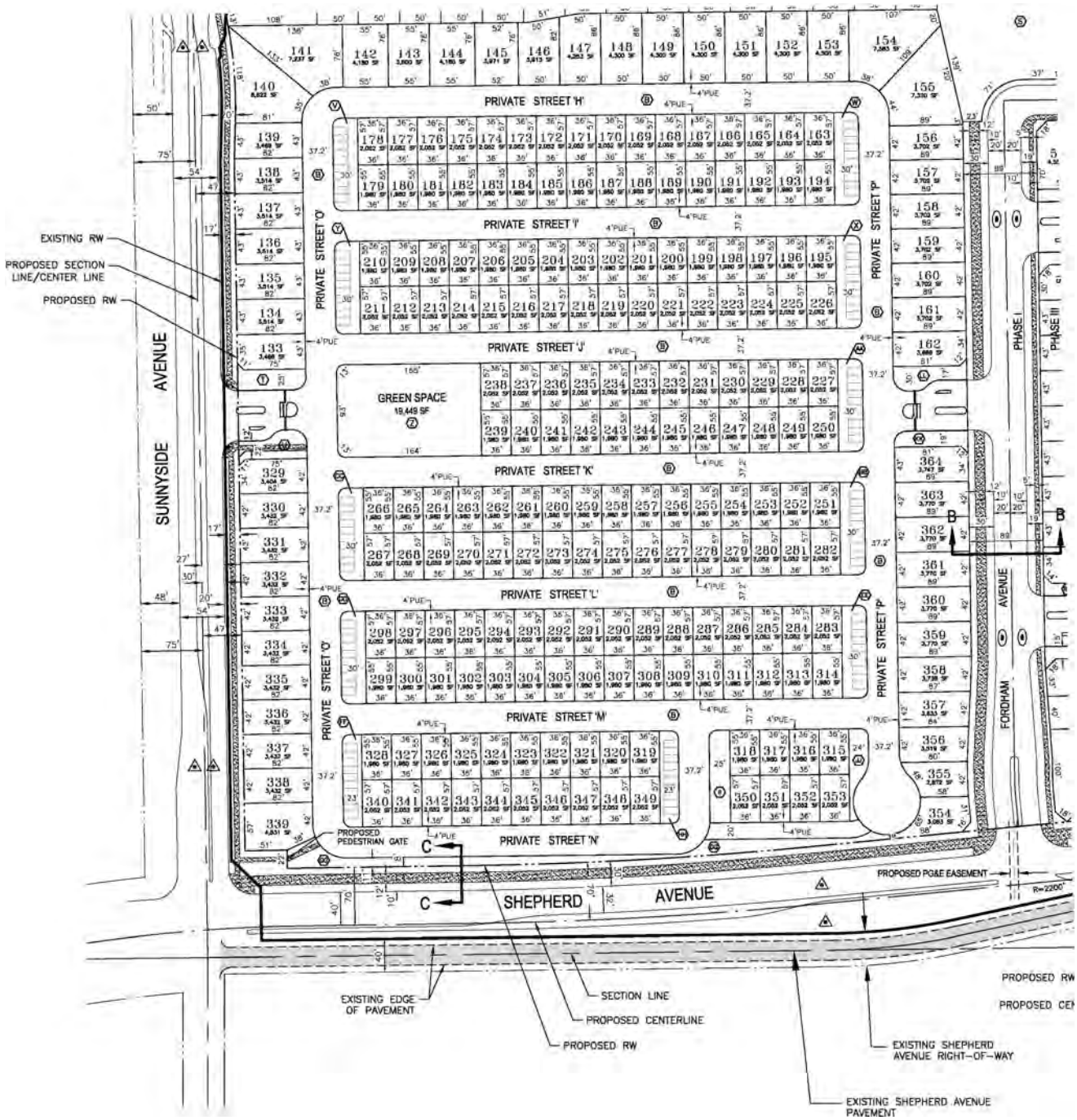

SHEPHERD NORTH PROJECT

Figure 2.0-11b. Tentative Subdivision Map Southwest

Sources: Harbour Associates. Map date: May 8, 2023.

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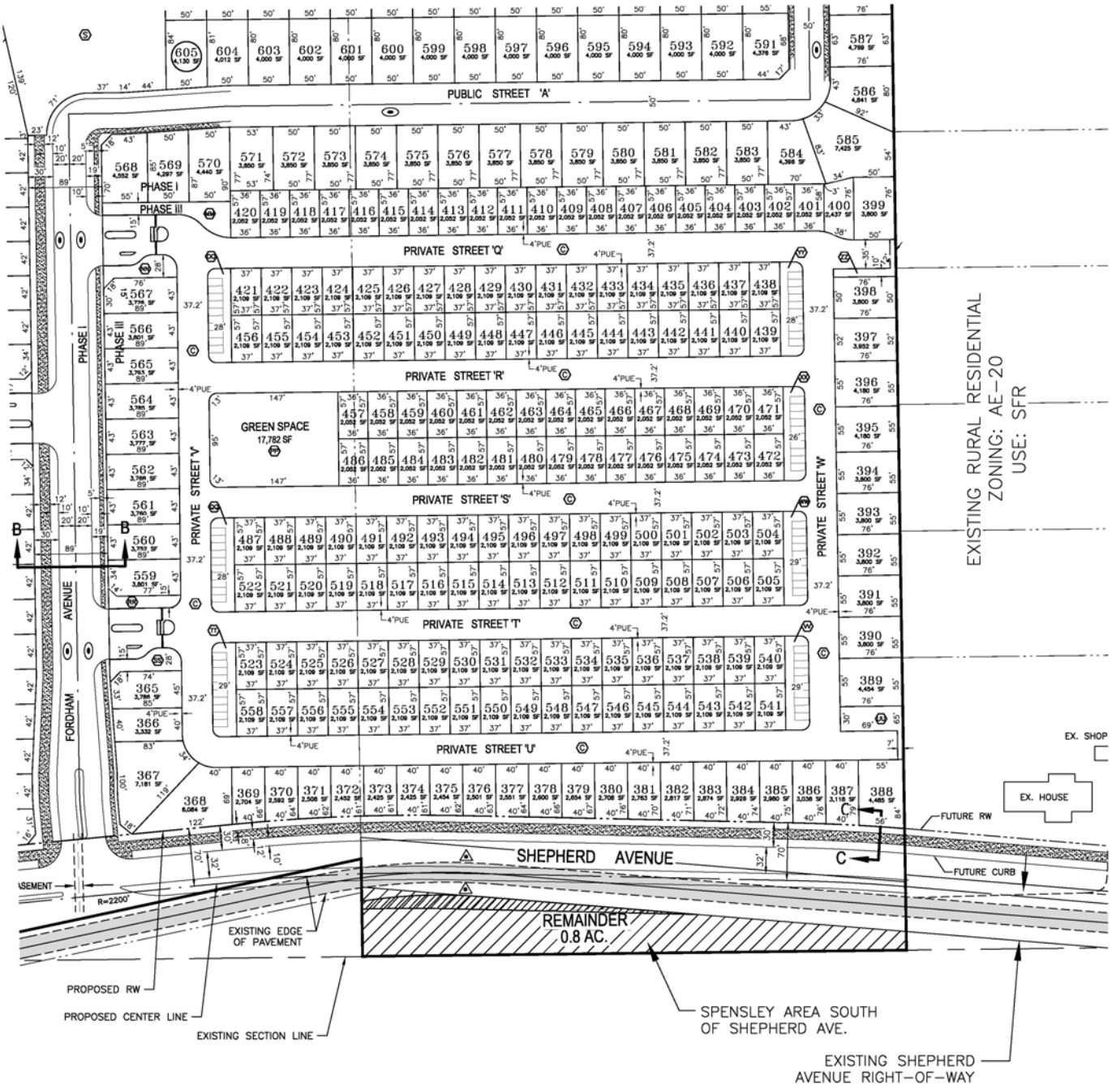

SHEPHERD NORTH PROJECT

Figure 2.0-11c. Tentative Subdivision Map Southeast

Sources: Harbour Associates. Map date: May 8, 2023.

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The City of Clovis possesses multiple scenic resources, and there are also scenic resources within the unincorporated areas of Fresno County. These resources enhance the quality of life for Clovis residents, and provide for outdoor recreational uses. Landscapes can be defined as a combination of four visual elements: landforms, water, vegetation, and man-made structures. Scenic resource quality is an assessment of the uniqueness or desirability of a visual element. This section provides a background discussion of the scenic highways and corridors, and natural scenic resources such as creeks, wildlife areas, and prominent visual features found in the Project site. This section is organized with an existing setting, regulatory setting, and impact analysis.

This section was prepared based on existing reports and literature for Clovis and the surrounding areas in Fresno County. Additional sources of information included the California Department of Transportation's (Caltrans) Designated Scenic Route map for Fresno County.

There were no comments received during the NOP comment period related to this environmental topic.

3.1.1 ENVIRONMENTAL SETTING

REGIONAL SCENIC RESOURCES

Visual resources are generally classified into two categories: scenic views and scenic resources. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually mid-ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements.

Aesthetically significant features occur in a diverse array of environments within the region, ranging in character from urban centers to rural agricultural lands to natural water bodies. Features of the built environment that may also have visual significance include individual or groups of structures that are distinctive due to their aesthetic, historical, social, or cultural significance or characteristics. Examples of the visually significant built environment may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, and a location where a historic event occurred.

SCENIC HIGHWAYS AND CORRIDORS

Scenic highways and corridors make major contributions to the quality of life enjoyed by the residents of a region. The development of community pride, the enhancement of property values, and the protection of aesthetically-pleasing open spaces reflecting a preference for the local lifestyle are all ways in which scenic corridors are valuable to residents.

Scenic highways and corridors can also strengthen the tourist industry. For many visitors, highway corridors will provide their only experience of the region. Enhancement and protection of these

corridors ensures that the tourist experience continues to be a positive one and, consequently, provides support for the tourist-related activities of the region's economy.

Scenic Highways

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

No officially designated State scenic highways are located in the City of Clovis. The nearest "eligible" State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The Project site is not visible from this roadway segment.

Scenic Corridors

A scenic corridor is the view from the road that may include a distant panorama and/or the immediate roadside area. A scenic corridor encompasses the outstanding natural features and landscapes that are considered scenic. It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.
- Gateways - locations which mark the entrance to a community or geographic area.

The adopted 1993 Clovis General Plan discusses scenic "landscape features" in its Open Space and Conservation Element. The element identifies Clovis, Shaw, and Herndon Avenues as gateways to the community and important visual links to Old Town Clovis from the greater Fresno Area. The Open Space and Conservation Element states that "the identity of the gateways will be established through landscape design and features reflecting the historic and 'small town' atmosphere." Although the three identified corridors are quite long and contain substantial segments that do not provide scenic vistas, the corridors physically and visually tie the community together. Other arterial roadways that travel east-to-west through the City of Clovis, such as Shepherd, Bullard, and Ashlan Avenues, span the community's suburban/rural interface and can also be considered scenic corridors under the Open Space and Conservation Element. These roadways provide a scenic and character transition through the nearly built-out core of Central Clovis into its pastoral agrarian areas to the north, east, and south. Segments of these roadways in the Sphere of Influence are in transition from agrarian to urban.

Of the roadways discussed above, Shepherd Avenue is located immediately south of the Project site and is developed to urban standards with few exceptions from Friant Rd to the west to the intersection of St. Rt. 168 to the east. Specifically, the General Plan EIR identifies views of the rolling grassy hills near the Friant-Kern Canal, pastoral agrarian areas, and the Sierra Nevada foothills to the east from the Shepherd Avenue corridor to be highly valued by visitors and residents of Clovis should be preserved and protected.

LIGHT AND GLARE

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination. This ambient light environment can be accentuated during periods of low clouds or fog.

The variety of urban land uses in the City of Clovis are the main source of daytime and nighttime light and glare. They are typified by single and multi-family residences, commercial structures, industrial areas, and streetlights. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the City. Sources of light and glare in the City of Clovis include building (interior and exterior), security, sign illumination, and parking-area lighting. Other sources of nighttime light and glare include streetlights and vehicular traffic along surrounding roadways. Additionally, The General Plan EIR (page 5.1-10) notes that there is a significant amount of ambient lighting comes from surrounding communities and roadways. Because the City of Clovis is adjacent to highly urbanized portions of the City of Fresno to the west and south, ambient light in the community is substantially impacted by land uses in Fresno. Large, light-intensive institutions and facilities near the City's boundary include Fresno Yosemite International Airport and CSU Fresno. Nevertheless, areas within the City Limits and SOI, which account for nearly half of the entire Planning Area of the City of Clovis, are mainly rural residential and agricultural land and have very few sources of light and glare, allowing for clear day and nighttime views. This is the case of the Project site given that it is in the northern portion of Clovis, which is distant from the more urban and densely populated areas of Fresno and Clovis.

Sources of glare in urbanized portions of the City come from light reflecting off surfaces, including glass, and certain siding and paving materials, as well as metal roofing. The urbanized areas of Clovis contain sidewalks and paved parking areas which reflect street and vehicle lights. The existing light environment found in the Project site is considered typical of suburban areas.

Sky glow is the effect created by light reflecting into the night sky. Sky glow is of particular concern in areas surrounding observatories, where darker night sky conditions are necessary, but is also of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife. Due to the urban nature of the City limits, a number of existing light sources affect residential areas and illuminate the night sky. Isolating impacts of particular sources of light or glare is therefore not appropriate or feasible for the proposed Project.

VISUAL CHARACTER AND SCENIC RESOURCES

Visual Character

The City of Clovis is in California's San Joaquin Valley, and like most communities in the region, features a flat landscape organized around an orthogonal system of roadways. Due to its rapid growth in recent years and its adjacency to the City of Fresno, Clovis has a largely suburban character. A majority of the City's land area is devoted to low density residential neighborhoods. However, because the community has grown from a small farming town and is still surrounded by agricultural land uses on three sides, it retains a rural atmosphere. The suburban/rural interface is most prominent on the City's eastern, southeastern, and southern edges. In these locations, new housing subdivisions are sited between working farms and large residential estate lots of two to five acres. The SOI beyond the City's Limits to the east, northeast, and north is dominated by agricultural uses and undeveloped open spaces. The Project site is located in the north, and the immediately surrounded area is best characterized as a mix of agricultural, suburban residential, and large estate lots with existing residences.

Other Scenic Resources Areas

The foothills and the mountains of the Sierra include a scenic backdrop for the City. The Sierra Nevada also provides a broad array of recreational opportunities to residents of Clovis and is directly accessible from the City via SR-168 or the "Sierra Freeway," which is a limited access roadway in urbanized Fresno and Clovis that bisects the City of Clovis. Natural resources in the Sierra Nevada foothills near Clovis include Millerton Lake State Recreation Area 14 miles to the north and Pine Flat Lake 30 miles to the east. The City itself contains no substantial, undeveloped natural resources other than the grasslands in its northeastern quadrant, north of Shepherd Avenue and Tollhouse Road/SR-168. Outside of this area, there are only remnants of native habitats and vegetation communities. However, irrigation canals throughout the City provide a scenic quality to the rural character of the region. Clovis also features numerous improved parks and green space areas that offer greenery and recreational opportunities to residents, such as the botanical gardens and a network of multipurpose trails. These open spaces also provide visual buffers that break up the monotony of the built environment.

Rolling grassy hills are in the City's northeastern quadrant, north of Shepherd Avenue and Tollhouse Road/SR-168 near the Friant-Kern Canal. These hills are outside the City and SOI boundaries. Grade separations along the Sierra Highway (SR-168), generally located at major interchanges, create some artificial changes in topography that offer limited views of the Sierra Nevada to the east. However, the remainder of the Clovis area is relatively flat and provides clear views of the Sierra Nevada. Agricultural lands have become important visual resources that contribute to the community identity of Clovis, and the Central Valley region. Agricultural lands provide for visual relief form urbanized areas and act as community separators to nearby urban areas.

PROJECT SITE

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

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The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

- Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
- Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Rural residential parcels have no required standards for uniform or complimentary landscaping. As such, Rural Residential developments have a mixture of highly manicured landscaping to little or no formal landscaping. Simply, the Rural Residential areas do not have landscaping which creates a wide spectrum of aesthetically pleasing landscape themes to unattractive unkept with little or no aesthetic value.

Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

There are minimal existing light sources on and adjacent to the Project site. Light sources are limited to the existing residential homes, roadway, and accessory agricultural structures adjacent to the Project Site.

The project site is located between the Northwest and the Northeast Urban Center area of the City of Clovis. The Northeast Urban Center area is mainly undeveloped and used primarily for agricultural and rural residential uses. The City of Clovis General Plan notes that the Northeast Urban Center is also relatively flat and offers the most direct and unobstructed views of the Sierra Nevada and foothills toward the northeast along State Route (SR)-168. The Northwest Urban center is currently urbanizing at a rapid pace, as intended by the General Plan.

Lastly, as noted before, the General Plan EIR identifies Shepherd Avenue as a scenic corridor, specifically referring to views of the rolling grassy hills near the Friant-Kern Canal, pastoral agrarian areas to the north, and the Sierra Nevada foothills to the east. Shepherd Avenue runs directly across the south boundary of the project site, however, the highest scenic qualities along Shepherd Avenue occur to the east of the Project site in the areas that are largely undeveloped with residences. It is noted that the General Plan EIR concluded that adoption of the General Plan, which contemplated urbanization of the agricultural lands within the General Plan study area, was a less than significant environmental impact.

3.1.2 REGULATORY SETTING

STATE

California Scenic Highway Program

The intent of the California Scenic Highway Program is "to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the State's scenic resources." Caltrans administers the program, which was established in 1963 and is governed by the California Streets and Highways Code §260 et seq. The goal of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of the adjacent land. Caltrans has compiled a list of state highways that are designated as scenic and county highways that are officially designated or eligible for designation as scenic. Scenic highway designation can provide several types of benefits to the region. Scenic areas are protected from encroachment of inappropriate land uses, free of billboards, and are generally required to maintain existing contours and preserve important vegetative features. Only low-density development is allowed on steep slopes and along ridgelines on scenic highways, and noise setbacks are required for residential development.

To obtain an official "Scenic Highway" designation, the State and Caltrans require a responsible local agency or Local Governing Body (LGB) to prepare a scenic corridor protection plan. In the Clovis area, Fresno County is the LGB. Corridor protection programs are required to contain the following five elements, which have been included in the Fresno County's policies:

- Regulations of land use and density of development;
- Detailed land and site planning;
- Control of outdoor advertising;
- Careful attention to and control of earthmoving and landscaping; and
- The design and appearance of structures and equipment.[1]

According to the Caltrans Scenic Highway Programs website, Caltrans monitors state-designated scenic routes in order to ensure each local jurisdiction's consistency with State guidelines. Specifically, Caltrans District Scenic Highway Coordinator (DSHC) will review a scenic highway for compliance every five years, but can recommend the revocation of scenic designation at any time. To enforce the program, the DSHC will contact the responsible local agency or LGB, in this case, Fresno County. The LGB must either respond by submitting its current Corridor Protection Program or a letter of intent to request a revocation of the scenic designation. The DSHC reviews the

[1] Scenic Highways Program website, List of eligible and officially designated State Scenic Highways (XLSX), https:// Scenic Highways | Caltrans, accessed on February 9, 2021.

submittal and takes corrective action to resolve any issues of non-compliance, certifies compliance, or recommends revocation of scenic designation.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to an evaluation of the visual quality of the Project site. The General Plan policies applicable to the Project are identified below:

Policies: Land Use Element

- LU-Policy 3.6. Mix of housing types and sizes. Development is encouraged to provide a mix of housing types, unit sizes, and densities at the block level. To accomplish this, individual projects five acres or larger may be developed at densities equivalent to one designation higher or lower than the assigned designation, provided that the density across an individual project remains consistent with the General Plan.

- LU-Policy 4.3. Future environmental clearance. The city shall monitor development and plan for additional environmental clearance as development levels approach those evaluated in the General Plan EIR.

- LU-Policy 4.4. Farmland conservation. Participate in regional farmland conservation, including the establishment of comprehensive agricultural preserves or easements, through efforts such as the Fresno County Model Farmland Conservation Program or the San Joaquin Valley Greenprint.

Policies: Circulation Element

- CIR-Policy 3.10 Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.

- CIR-Policy 3.11 Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.

- CIR-Policy 3.12 Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets, and encourage pedestrian and bicycle access.

- CIR-Policy 5.3 Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.

Policies: Open Space and Conservation Element

- OSC-Policy 1.1 Parkland standard. Provide a minimum of 4 acres of public parkland for every 1,000 residents.

- OSC-Policy 1.3. New parks and recreation facilities. Provide a variety of parks and recreation facilities in underserved and growing areas of the community.
- OSC-Policy 1.5. Multipurpose open space. Design public facilities as multipurpose open space and recreation to serve the community's infrastructure needs while preserving and enhancing open space and water features. Prioritize the use of existing basins for existing areas, and for future areas prioritize the development of separate park facilities available year round.
- OSC-Policy 2.2. New development. Encourage new development to incorporate on-site natural resources and low impact development techniques.
- OSC-Policy 2.3. Visual resources. Maintain public views of open spaces, parks, and natural features. Enhance views along roadways and trails. Preserve Clovis' viewshed of the surrounding foothills and orient new development to capitalize on views of the Sierra Nevada.
- OSC-Policy 3.4. Drought-tolerant landscaping. Promote water conservation through the use of drought-tolerant landscaping on existing and new residential properties. Require drought-tolerant landscaping for all new commercial and industrial development and city-maintained landscaping, unless used for recreation purposes.

City of Clovis Zoning Ordinance

Chapter 9.28 Landscaping Standards, of the City Development Code contains standards and provisions related to landscaping design requirements that would apply to the proposed Project. The primary intent of Chapter 9.28 Landscaping Standards, is to enhance the appearance of all development by providing standards relating to the quality, quantity, and functional aspects of landscaping and landscape screening; protect public health, safety, and welfare by minimizing the impact of all forms of physical and visual pollution, controlling soil erosion, screening incompatible land uses, preserving the integrity of existing residential neighborhoods, and enhancing pedestrian and vehicular traffic and safety; and decrease the use of water for landscaping purposes by requiring the efficient use of irrigation, appropriate plant materials, and regular maintenance of landscaped areas.

Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting, which requires that light be shielded so that light does not spill onto adjacent properties; are architecturally integrated with the character of on-site and adjacent structures; and incorporate appropriate height, intensity, and scale to the uses they are serving.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- In non-urbanized areas, 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; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The evaluation of aesthetics and aesthetic impacts is highly subjective, yet it requires the application of a process that objectively identifies the visual features of the existing environment and their importance. The characterization of aesthetics involves establishing existing visual character, including resources and scenic vistas unique to the Project site and vicinity. Visual resources are determined by identifying existing landforms (e.g. topography and grading), views (e.g. scenic resources such as natural features or urban characteristics), viewing points/locations, and existing light and glare (e.g. nighttime illumination). Changes to the existing aesthetic environment that would result due to implementation of the proposed Project are identified and qualitatively evaluated based on the proposed modifications to the existing setting and the viewer's sensitivity. Project-related impacts are compared to the context of the existing setting, using the thresholds listed above. The following impact analysis addresses thresholds of significance.

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character. (Less than Significant)

The proposed Project involves the expansion of the City's Sphere of Influence (SOI) to add approximately 155 acres into the City of Clovis' SOI, including the annexation/reorganization of the proposed 77-acre Development Area to develop 605 single-family detached units, open space totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. As mentioned previously, the non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development and no new development or improvements are proposed as part of this proposed Project for the Non-development Area. Therefore, the existing visual character of the Non-development Area would not change as part of this proposed Project.

Development of the proposed Project would convert the 77-acre Development Area from its existing use as primarily agricultural land (pecan orchard) to a residential neighborhood. The neighborhoods within the Development Area would include a network of streets to provide an efficient flow of

traffic through the area. Other uses to support and compliment the proposed residential development include underground (non-visible) wet and dry utility infrastructure, roadways with curb/gutters/sidewalks, bicycle/pedestrian facilities, street lighting, and street signage.

The Project site is not designated as a scenic vista by the City of Clovis General Plan or the Fresno County General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista. However, the City's General Plan EIR considers Shepherd Avenue a scenic corridor under the General Plan Open Space and Conservation Element. The City's General Plan EIR notes that new development will impact current views of open space, which are primarily vistas of agricultural fields and orchards. These public views are primarily available to motorists traveling along roadways which bound the Development Area. Implementation of the proposed Project would change the existing visual character of the Development Area from a primarily agricultural site to a developed suburban neighborhood. These impacts related to a change in visual character may be considered "attractive" to one viewer and "unattractive" to other viewers. It is noted that the Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the agricultural lands within the General Plan study area, was a less than significant environmental impact.

Policy 2.3 of the Clovis General Plan Update's Open Space and Conservation Element gives substantial consideration to the preservation of scenic vistas, corridors, and scenic resources, such as maintaining public views of open spaces, parks, and natural features; enhancing views along roadways and trails; preserving Clovis' viewshed of the surrounding foothills; and orienting new development to capitalize on views of the Sierra Nevada. Chapter 9 of the Clovis Development Code also establishes requirements for fences, walls, and hedges to ensure that these elements minimize screening of scenic views and sunlight by outlining provisions such as height limitations, design and construction materials, site plan review requirements, allowable fencing materials, etc. per Section 9.24.060 (Fences, Walls, and Hedges); and screening and buffering requirements of adjoining land uses, utility equipment, and refuse areas are detailed in Section 9.24.090 (Screening and Buffering). Development in accordance to these code requirements would ensure that the implantation of the proposed Project would not have a substantial adverse impact on scenic vistas, corridors, or resources in the City of Clovis.

The Project site currently consists primarily of agricultural lands, primarily a pecan orchard that is currently being removed due to the tree mortality, the agricultural land provides visual relief from urban and suburban developments, and helps to define the character of a region. The proposed Project would develop the last remaining property in agricultural use in an area surrounded by urban and Rural Residential uses. Supporting infrastructure would be extended to the area, which would result in the permanent loss of these agricultural uses. Under some circumstances, loss of agricultural lands could have an adverse cumulative impact on the overall visual character and quality of a region. As noted above, however, the pecan orchard portion of the Project site is an island of agricultural land use surrounded by developed homes to the east, north, and south, and an entitled residential subdivision to the west. What this means is that the pecan orchard is a relic agricultural piece of property that has remained intact and operational despite the properties in the

immediate surrounding aesthetically changing to suburban residential aesthetic. The proposed Project would change the existing aesthetic of the Project site to be consistent with the urban landscaping theme established for Shepherd Avenue by the City of Fresno and its urban projects as well as the City of Clovis and its urban projects that generally continues that urban landscaping theme along Shepherd Avenue. With few exceptions, both cities have required residential projects to construct a uniform 6 ft. tall concrete block wall setback at least 30 feet from the street with landscaping, sidewalks and bike lanes. Trees of a small to medium size and a variety of shrubs create a generally consistent shared landscape theme by both cities.

In addition, a change in the visual character of a project site does not necessarily mean the visual character of the project site or the surrounding area will be degraded. The Project applicant has submitted a conceptual plan for the project detailing the Shepherd Avenue and open space landscaping for the proposed developed prepared by a licensed landscape architect. That conceptual landscape plan includes visual components that will enhance the appearance of the neighborhood once developed similar to those constructed by adjacent residential projects along Shepherd Avenue. These improvements include landscaping improvements like new street trees and other neighborhood greenery along Shepherd and Sunnyside Street frontages of the Project. The proposed Project would also result in the construction of park and open space areas which provides some visual relief within residential subdivisions. While implementation of the proposed Project would change the existing visual character of the area, the development components of the subdivisions are in alignment with the City's requirements for residential subdivisions in the region.

To reduce the visual impact of the development, development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, as described above, which includes design standards. The City of Clovis zoning ordinance and ministerial permits design, construction and maintenance standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design, construction, and maintenance requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding urban uses.

The loss of the visual appearance of the agricultural land on the site will change the visual character of the Project site in perpetuity, which some people are expected to view as a loss of an isolated visually attractive amenity. Compliance with the requirements within the General Plan, as well as the Municipal Code (specifically Title 7 Public Works, Title 8 Building Regulations, Title 9 Development Code, and Title 10 Parks and Recreation), for the design, construction, and maintenance of the project will be required. Title 9 Development Code Division 3 includes a series of Development and Operational Standards that are aimed at creating uniform performance standards which are designed to minimize and mitigate the potential impacts of development within the City and promote compatibility with surrounding areas and land uses. These standards cover topics such as exterior light and glare (Section 9.22.050), fences, walls, and hedges (Section 9.24.060), height measure and height limit exceptions (9.24.080), screening and buffering (Section 9.24.090), setback regulations and exceptions (Section 9.24.100), landscaping standards (Chapter

9.28), tree protection standards (Chapter 9.30), and signs (Chapter 9.34). Some of these standards and requirements from pre-existing regulations are implemented after Project entitlement when more detailed site planning, engineering, and architecture is performed. The final approval of these items is ministerial. Some examples of requirements that the Project will follow are:

1. The Project will be required to submit and obtain approval form the City of Clovis of a comprehensive landscape and irrigation plan prepared by a licensed landscape architect that is in substantial conformity with the submitted project conceptual landscaping plan, entry treatment and park improvements. The City of Clovis ministerial permits for landscaping, irrigation and grading will assure said landscaping and irrigation complies with applicable state and local plant type and irrigation and grading standards.
2. The Project will be required to annex into a City of Clovis landscaping lighting and maintenance district (LLMD) that will assure that all landscaping and lighting within the public easements along Shepherd and Sunnyside Avenues are properly maintained in manner acceptable to the City of Clovis.
3. The Project will form a common interest association for the purpose of, among other things, common area maintenance. Said maintenance will be at the Project owner's expense. The common interest association will be subject to California Department of Real Estate operational and financial surety requirements.
4. Each Project lot will be subject to the City of Clovis requirement that a Site Plan Review be submitted and approved by the City of Clovis. The Site Plan Review process will require, among other things, that all lots meet applicable development standards; share a compatible architectural, landscaping and color scheme and conform to mandatory grading and drainage standards.

The Municipal Code implements the policies of the Clovis General Plan by classifying and regulating the uses of land and structures within the City of Clovis. The Municipal Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the City. These existing requirements provide standards for the orderly growth and development of the City to establish and maintain the community's history and quality characteristics in appropriate locations. It requires high quality planning and design for development that enhances the visual character of the City, avoids conflicts between land uses, encourages the appropriate mix of uses, and preserves the scenic qualities of the City. It also creates a comprehensive and stable pattern of land uses upon which to plan sewerage, transportation, water supply, and other public facilities and utilities. Overall, these mandatory requirements are deemed effective in reducing potential visual impacts. This is particularly true here where the project site is an isolated and remnant agricultural use surrounded by residential and rural residential land uses. Therefore, the Project's potential to adversely impact aesthetics is considered **less than significant.**

Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway. (Less than Significant)

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic

highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system. As such, this is a **less than significant** impact, and no mitigation is required.

Impact 3.1-3: Project implementation may result in light and glare impacts. (Less than Significant)

As noted in Impact 3.1-1, the proposed Project involves the development of up to 605 single-family residential units, open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Development Area and from vehicles parked within the Project site. However, parking for the proposed residential uses in the Development Area would primarily occur within enclosed garages and driveways. Headlights and windshields would be shielded by the proposed residential structures within the site. Additionally, the Project includes plans for extensive landscaping and open space areas throughout the site, which would provide visual screening and block potential windshield glare for sensitive receptors within the Project site. Residential structures placed along the boundaries of the Development Area would provide visual screening and block potential windshield glare to areas surrounding the Project site.

Additionally, several roadways would be constructed within the Development Area to serve the proposed single-family residential uses. These roadways would result in the introduction of street lighting into a currently undeveloped site. However, the proposed single-family residential uses and local roadway would be typical of what is already experienced as a result of the existing single-family residential uses and local roadways that occur within the surrounding area. The proposed single-family residential uses would be an extension of single-family residential uses adjacent to the Project site.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. While implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs.

Overall, the proposed Project would introduce new sources of daytime and nighttime lighting within the Project site that do not currently exist. However, it is noted there are no specific features within the proposed Project that would create unusual light and glare. Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light

spillover impacts on surrounding land uses in the absence of a lighting plan that includes photometrics of the lighting. Any new lighting associated with implementation of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a **less than significant** level.

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This section provides an overview of agricultural resources in Fresno County and the City of Clovis, agricultural capability of the soils on the Project site, and existing site conditions. This section concludes with an evaluation of the impacts related to agricultural resources and recommendations for mitigating impacts as needed. Information in this section is derived primarily from:

- *City of Clovis General Plan* (City of Clovis, August 2014);
- Clovis *General Plan Draft Environmental Impact Report* (City of Clovis, June 2014);
- *California Important Farmlands Map* (California Department of Conservation, 2022);
- *California Land Conservation (Williamson) Act Status Report* (California Department of Conservation, 2021;
- *Fresno County Crop Report* (Fresno County Department of Agriculture, 2021);
- *Natural Resources Conservation Service* (NRCS) Web Soil Survey (NRCS, 2022);
- *A Landscape of Choice – Strategies for improving patterns of Community Growth (April 1998); and*
- *Geotechnical Engineering Investigation Proposed Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California (*Krazan & Associates, Inc., 2019) (Appendix F).

It is noted that there are no forest resources located on the Project site or in the City of Clovis, thus this CEQA topic is not relevant to the proposed Project and will not be addressed further in this EIR.

There was one comment received from the California Department of Conservation during the NOP scoping process related to this environmental topic. The comment is included as an appendix to this report and is addressed in part by the contents of this section.

3.2.1 ENVIRONMENTAL SETTING

FRESNO COUNTY AGRICULTURE

Fresno County occupies a central location in California's vast agricultural heartland, the San Joaquin Valley. The County's Agricultural Commissioner's most recent published Agricultural Report (2021) contains the following information relating to agriculture in the County.

Agricultural Value

The gross value of agricultural production in Fresno County for 2021 was $8,085,567,000 which represents an increase of $117,167,000 or 1.47% above the previous year's revised total of $7,968,400,000. Table 3.2-1 lists the nine primary commodities in Fresno County in 2020 and 2021.

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

PRODUCT TYPE	*2020 VALUE IN DOLLARS*	*2021 VALUE IN DOLLARS*
Field Crops	$299,961,000	$369,792,000
Vegetable Crops	$1,418,639,000	$1,219,120,000
Fruit and Nut Crops	$4,561,749,000	$4,793,849,000
Nursery Products	$39,201,000	$47,941,000
Livestock and Poultry	$1,022,018,000	$990,996,000
Livestock and Poultry Products	$473,272,000	$500,528,000

PRODUCT TYPE	2020 VALUE IN DOLLARS	2021 VALUE IN DOLLARS
Seed Crops	$8,812,000	$24,151,000
Apiary Products	$141,505,000	$133,585,000
Other Products (Industrial Crops)	$3,243,000	$5,605,000

SOURCE: FRESNO COUNTY AGRICULTURAL REPORT, 2021.

AGRICULTURAL CAPABILITY

The California Department of Conservation Farmland Mapping and Monitoring Program identifies lands that have agriculture value and maintains a statewide map of these lands called the Important Farmlands Inventory (IFI). IFI classifies land based upon the productive capabilities of the land, rather than the mere presence of ideal soil conditions.

The suitability of soils for agricultural use is just one factor for determining the productive capabilities of land. Suitability is determined based on many characteristics, including fertility, slope, texture, drainage, depth, and salt content. A variety of classification systems have been devised by the State to categorize soil capabilities. The two most widely used systems are the Capability Classification System and the Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating. The IFI is in part based upon both of these two classification systems.

Soil Capability Classification System

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils that are unsuitable for agriculture. Generally, as the rating of the capability classification increases, yields and profits are more difficult to obtain. A general description of soil classifications, as defined by the Natural Resources Conservation Service (NRCS) is provided in Table 3.2-2 below.

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

CLASS	DEFINITION
I	Soils have slight limitations that restrict their use.
II	Soils have moderate limitations that restrict choice plants or that require moderate conservation practices.
III	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
V	Soils are not likely to erode, but have other limitations; impractical to remove that limits their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plans and restrict their use to recreation, wildlife habitat, water supply, or aesthetic purposes.

SOURCE: USDA SOIL CONSERVATION SERVICE.

Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating) which have few or no limitations for agricultural production, to Grade 6 soils (less than 10) which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided below in Table 3.2-3.

TABLE 3.2-3: STORIE INDEX RATING SYSTEM

GRADE	*INDEX RATING*	*DEFINITION*
1	80 – 100	Few limitations that restrict their use for crops
2	60 – 80	Suitable for most crops, but have minor limitations that narrow the choice of crops and have a few special management needs
3	40 – 60	Suited to a few crops or to special crops and require special management
4	20 – 40	If used for crops, severely limited and require special management
5	10 – 20	Not suited for cultivated crops, but can be used for pasture and range
6	Less than 10	Soil and land types generally not suited to farming

SOURCE: NRCS WEB SOIL SURVEY, 2019.

In addition to soil suitability, other factors for determining the agricultural value of land include whether soils are irrigated, the depth of soil, water-holding capacity, and physical and chemical characteristics. Areas considered to have the greatest agricultural potential are designated as Prime Farmland or Farmland of Statewide Importance.

Important Farmlands

The Farmland Mapping and Monitoring Program (FMMP) is a farmland classification system administered by the California Department of Conservation. Important farmland maps are based on the Land Inventory and Monitoring criteria, which classify a land's suitability for agricultural production based on both the physical and chemical characteristics of soils, and the actual land use. The system maps five categories of agricultural land, which include important farmlands (prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance) and grazing land, as well as three categories of non-agricultural land, which include urban and built-up land, other land, and water area.

IMPORTANT FARMLANDS IN FRESNO COUNTY

Data from the Department of Conservation indicates that approximately 1,858 acres of Prime Farmland in the County were developed for other uses between 2016 and 2018, resulting in an existing total of 381,934 acres of Prime Farmland (42 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (9 percent), Unique Farmland (9 percent), Farmland of Local Importance (7 percent), and Grazing Land (14 percent). The types and acreages of farmland in 2016 and 2018 are shown in Table 3.2-4.

TABLE 3.2-4: FRESNO COUNTY FARMLANDS SUMMARY AND CHANGE BY LAND USE CATEGORY

LAND USE CATEGORY	2016-2018 ACREAGE CHANGES							
	TOTAL ACREAGE INVENTORIED				ACRES LOST	ACRES GAINED	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
	2016		2018		(-)	(+)		
	Acres	Percent	Acres	Percent				
Prime Farmland	675,720	28%	672,208	28%	7,237	3,725	10,962	-3,512
Farmland of Statewide Importance	397,133	16%	395,148	16%	3,945	1,960	5,905	-1,985
Unique Farmland	94,902	4%	95,352	4%	809	1,259	2,068	450
Farmland of Local Importance	191,783	8%	192,434	8%	9,946	10,597	20,543	651
IMPORTANT FARMLAND SUBTOTAL	1,359,538	56%	1,355,142	56%	**21,937**	**17,541**	**39,478**	**-4,396**
Grazing Land	822,696	34%	822,455	34%	718	477	1,195	-241
AGRICULTURAL LAND SUBTOTAL	2,182,234	90%	2,177,597	89%	**22,655**	**18,018**	**40,673**	**-4,637**
Urban and Built-up Land	128,910	5%	132,868	5%	685	4,643	5,328	3,958
Other Land	121,445	5%	121,847	5%	1,745	2,211	3,956	466
Water Area	4,908	<1%	5,121	<1%	64	277	341	213
TOTAL AREA INVENTORIED	**2,437,497**	**100%**	**2,437,433**	**100%**	**25,149**	**25,149**	**50,298**	**0**

SOURCE: CA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION TABLE A-30, 2018.

EXISTING SITE CONDITIONS

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

- Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin

Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.

- Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Surrounding Land Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site are single family residential subdivisions under construction and a power sub-station.

Project Site Farmland Characteristics

The State of California Department of Conservation FMMP and Fresno County GIS data were used to illustrate the farmland designations for the Project site. The last mapping date in Fresno County is June 2020. Farmlands on the Project site are identified in Figure 3.2-1. The farmland classifications for the site and surrounding area are described below. It is important to note that the California Department of Conservation notes on the map that "*This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data*."

PRIME FARMLAND

Prime Farmland is farmland with the best combination of physical and chemical features able 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.

According to the June 2020 Important Farmland Map, approximately 63.73 acres of Prime Farmland are in the Project Site with approximately 63.60 acres of the Prime Farmland in the Development Area. Prime Farmland is also shown immediately west of the Project Site. This designation, however, does not fully consider site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility

of agricultural operations due to other factors. The LESA model shows that the loss of this land does not exceed the threshold of significance, which suggests that the 2020 Important Farmland Map designating the Project site as Prime farmland is not justified for the site-specific conditions. The results of the LESA Model are included as Appendix B, and are discussed more in the Impact Analysis.

FARMLAND OF STATEWIDE IMPORTANCE

Farmland of Statewide Importance is farmland with characteristics similar to those of Prime Farmland, but with minor shortcomings, such as greater slopes or less 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.

Approximately 11.47 acres of Farmland of Statewide Importance are in the Project Site with approximately 11.44 acres of the Farmland of Statewide Importance in the Development Area. Similar to what was discuss under the Prime Farmland discussion above, this designation does not fully consider site specific characteristics. As previously explained, the LESA model shows that the loss of this land does not exceed the threshold of significance, which suggests that the 2020 Important Farmland Map designating the Project site as Farmland of Statewide Importance is not justified for the site-specific conditions. The results of the LESA Model are included as Appendix B, and are discussed more in the Impact Analysis.

UNIQUE FARMLAND

Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated 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.

There is no Unique Farmland within the Project site, or in the immediately vicinity, that is designated Unique Farmland.

FARMLAND OF LOCAL IMPORTANCE

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

There is no Farmland of Local Importance located within the Project site. Farmland of Local Importance is located to the northwest of the Project site.

URBAN AND BUILT-UP LAND

Urban and Built-up Land is land occupied by structures with a building density of at least one (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.

Approximately 41.02 acres of Urban and Built-up Land are located on the Project site with approximately 1.68 acres located within the Development Area of the Project Site. Urban and Built-up Land is located to the north and south of the Project site.

RURAL RESIDENTIAL LAND

Rural Residential Land has a building density of less than 1 structure per 1.5 acres, but with at least 1 structure per 10 acres.

Approximately 38.89 acres of Rural Residential land are located within the Project site with approximately 1.70 acres located within the Development Area of the Project Site.

OTHER LAND

Other Land is not included in any other mapping category. Common examples include brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty (40) acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Other Land is not located on the Project site or within the general vicinity of the Project as shown on Figure 3.2-1.

Soils and Farmland Characteristics

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. Table 3.2-5 identifies the soils found in the Project area. The NRCS Soils Map is provided on Figure 3.2-2. In addition, a Geotechnical Engineering Investigation was performed by Krazan and Associates, Inc. on January 24, 2019, that further refined the soil conditions through physical drilling and testing. This report essentially denotes that the majority of the property has a thin layer of productive soil, underlaid by a hardpan and perched water that is not conducive to sustained long term agricultural production.

TABLE 3.2-5: PROJECT SITE SOILS

MAP UNIT SYMBOL	*NAME*	*ACRES IN DEVELOPMENT AREA*	*PERCENT OF DEVELOPMENT AREA*	*ACRES IN NON-DEVELOPMENT AREA*	*PERCENT OF NON-DEVELOPMENT AREA*	*CAPABILITY CLASSIFICATION**	*STORIE INDEX*
An	Alamo clay	0.00	0.0%	0.27	0%	IIIw-IVw	6
ArA	Atwater sandy loam, 0 to 3 percent slopes	10.85	13.8%	16.21	21%	IIs-IVs	93
Gf	Grangeville fine sandy loam, 0 to 1 percent slopes	23.05	29.4%	8.49	11%	IIw-IVw	30

Gg	Grangeville fine sandy loam, saline alkali	3.36	4.3%	0.09	0%	IIs-IVs	56
Re	Ramona loam, hard substratum	20.39	26.0%	30.92	40%	IIs-IVs	48
Rh	Riverwash	0.81	1.0%	0.04	0%	VIII	25
SeA	San Joaquin loam, 0 to 3 percent slopes	11.54	14.7%	12.62	16%	IIIs-IVs	31
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	0.00	0.0%	1.86	2%	IVs-IVs	65
VaA	Visalia sandy loam, 0 to 3 percent slopes	8.42	10.7%	6.19	8%	I-IVc	95

** DEPICTS IRRIGATED VS NON IRRIGATED CAPABILITY RATING*

SOURCE: FRESNO COUNTY GIS, NRCS SOILS DATABASE, JULY 19, 2022.

Alamo clay. The Alamo series consists of moderately deep to hardpan, poorly drained soils that formed in alluvium from mixed sources. Alamo soils are in basins and drainageways on floodplains and fan remnants. Slope ranges from 0 to 2 percent.

Atwater sandy loam. The Atwater series consists of very deep, well drained soils formed in granitic alluvium. Soils are well drained with moderately rapid permeability and slow runoff. Used mainly for production of truck crops, grapes, tree fruits, nuts, grain, and alfalfa. Vegetation consists of annual grasses, weeds, and low-growing shrubs.

Grangeville fine sandy loam. The Grangeville series consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Grangeville soils are on alluvial fans and floodplains and have slopes ranging from 0 to 2 percent. Somewhat poorly drained; this soil has altered drainage because of the dams and reservoirs in the Sierra Nevada, pumping from the water table, tile and interceptor drains, and filling and leveling of sloughs in the vicinity. Negligible to very low runoff; moderately rapid permeability and moderate permeability in saline-sodic phases. Used intensively for growing alfalfa, grapes, cotton, truck crops and irrigated pasture. Some areas are being urbanized. Vegetation in uncultivated areas is annual grasses and forbs with native (sodic) alkali-tolerant plants and a few scattered oak and cottonwood trees.

Ramona loam. The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. Typically, Ramona soils have brown, slightly and medium acid, sandy loam and fine sandy loam A horizons, reddish brown and yellowish red, slightly acid, sandy clay loam B2t horizons, and strong brown, neutral, fine sandy loam C horizons. Well-drained; slow to rapid runoff; moderately slow permeability. Used mostly for production of grain, grain-hay, pasture, irrigated citrus, olives, truck crops, and deciduous fruits. Uncultivated areas have a cover of annual grasses, forbs, chamise or chaparral.

Riverwash. Riverwash consists of the unvegetated sand bars in the main channel of rivers that are frequently flooded.

San Joaquin loam. The San Joaquin series 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. They are on undulating low terraces with slopes of 0 to 9 percent. Well and moderately well drained; medium to very high runoff; very slow permeability. Some areas are subject to rare or occasional flooding. Used for cropland and livestock grazing; crops are small grains, irrigated pasture and rice; vineyards, fruit and nut crops.

Tujunga loamy sand. The Tujunga series 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. Slopes range from 0 to 12 percent. This soil is used for grazing, citrus, grapes, other fruits, and urban residential or commercial development. Uncultivated areas have a cover of shrubs, annual grasses and forbs. In urban areas, ornamentals and turf-grass are common.

Visalia sandy loam. This series consists of well drained soils. They formed in alluvium derived from granite. Slopes range from 5 to 9 percent. Common uses for this series include irrigated cropland and this soil is considered Prime farmland, if irrigated.

Availability of Water Resources and Feasibility

For several years, the current property owner has been responsible for managing the former Cal-Pecan orchard located on the Project site. In recent years, primarily due to drought conditions and expansion of new development surrounding the former Cal-Pecan orchard, the economically viable of irrigated agricultural production has diminished. The Project site is located entirely north and east of the Enterprise Canal and therefore outside of the nearby Fresno Irrigation District boundary. It is therefore not eligible to receive deliveries of surface water from any irrigation district. This is an entirely different situation from other properties located in the region, such as the nearby Heritage Grove growth area. A portion of Heritage Grove is located on the west side of the Enterprise Canal and continues to receive deliveries of surface water to support agricultural production. Recent SIGMA regulatory changes that now severely limit groundwater pumping has constrained the ability of any agricultural properties located outside of an irrigation district to support intensive agricultural uses that require regular and timely irrigation; further, groundwater pumping on this property has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. The property owner has indicated that they made every effort to continue irrigating the trees throughout the drought

conditions last summer, but the wells on the Project site went entirely dry and caused the pumps to burn out. The pecan trees suffered tremendous damage without available irrigation water and it resulted in large-scale tree mortality.

Additionally, as a result of the recent SIGMA regulatory changes, virtually all agricultural lending banks and institutions have recently changed their lending requirements to now demand availability of two sources of water (groundwater and surface water) as a condition for continued lending. The Project site cannot meet the new lending requirement because it is located outside of an irrigation district and is no longer eligible to obtain agricultural loans to support commercial agricultural operations.

The property owner also has noted that the soil substructure varies greatly on the Project site and is not accurately reflected in the more generic soil types documented in the Soil Survey for the region. The property owner has indicated that the soils are not conducive to produce high agricultural yields because there is a cemented silty sand, clayey sand, and silty sand with clay, locally referred to as "hardpan" that is encountered below 2 feet across much of the Project site. This cementation retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface during winter periods of precipitation. The perched water table can result in anerobic conditions in the root zone, which can result in root mortality and damage or death to the crop. This hardpan layer limits the types of crops that can be successful and is generally a variable that makes the property less economically viable for agricultural production.

The property owner has also indicated that the proximity of the Project site to existing urban development diminishes the economic viability of agricultural production. The property owner has indicated that there is increased vandalism, theft and harassment costs in recent years. The property owner cited last summer as particularly troublesome when neighbors would routinely shut-off irrigation pumps during the night and the valves in the orchard rows that are necessary to regulate pressure to operate the system were stolen. The property owner noted that equipment vandalism and theft occurred regularly and continued agricultural operations are now virtually impossible.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It ensures that, to the extent practicable, federal programs are compatible with State and local units of government as well as private programs and policies to protect farmland. 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. For the purpose of the 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 crop production. In fact, the land can be forest land, pastureland, cropland, or other land, but does not include water bodies or land developed for urban land uses (i.e., residential, commercial, or industrial uses).

The Natural Resource Conservation Service (NRCS) administers the Farmland Protection Program. NRCS uses a land evaluation and site assessment (LESA) system to establish a farmland conversion impact rating score on proposed sites of federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. The assessment is completed on form AD-1006, Farmland Conversion Impact Rating. The sponsoring agency completes the site assessment portion of the AD-1006, which assesses non-soil related criteria such as the potential for impact on the local agricultural economy if the land is converted to non-farm use and compatibility with existing agricultural use.

The Project site and adjacent parcels will not be completed by a federal agency, or with assistance from a federal agency. Therefore, the Project will not be subject to the FPPA.

STATE

Williamson Act

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was established based on numerous State legislative findings regarding the importance of agricultural lands in an urbanizing society. Policies emanating from those findings include those that discourage premature and unnecessary conversion of agricultural land to urban uses and discourage discontinuous urban development patterns, which unnecessarily increase the costs of community services to community residents.

The Williamson Act authorizes each County to establish an agricultural preserve. Land that is within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 10-year term that is automatically renewed each year, unless the property owner requests a non-renewal or the contract is cancelled. If the contract is cancelled, the property owner is assessed a fee of up to 12.5 percent of the property value.

The Project site is not under a Williamson Act contract, however, a small parcel immediately south of the Project Site, on the opposite side of Shepherd Avenue, is designated Williamson Act Non-Renewal. Figure 3.2-3 Shows Williams Act contact land within the vicinity of the Project Site.

Farmland Security Zones

In 1998, the State legislature established the Farmland Security Zone (FSZ) program. FSZs are similar to Williamson Act contracts, in that the intention is to protect farmland from conversion. The main difference however, is that the FSZ must be designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. The term of the contract is a

minimum of 20 years. The property owners are offered an incentive of greater property tax reductions when compared to the Williamson Act contract tax incentives; the incentives were developed to encourage conservation of prime farmland through FSZs. The non-renewal and cancellation procedures are similar to those for Williamson Act contracts.

The Project site and the adjacent parcels are not within the FSZ program.

California Government Code Section 56064

This section of the Government Codes defines "Prime agricultural land" as follows:

- Prime agricultural land means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:
    - Land that qualifies, if irrigated, for rating as Class I or Class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
    - Land that qualifies for rating 80 through 100 Storie Index Rating.
    - Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
    - Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will re-turn during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.
    - Land that has returned from the production of unprocessed agricultural plant products on an annual gross value of not less than four hundred dollars ($400) per acre for three of the previous five calendar years.

LOCAL

Local Agency Formation Commission Boundary Controls

The Fresno Local Agency Formation Commission (LAFCo) is responsible for coordinating orderly amendments to local jurisdictional boundaries, including annexations. Annexation of the Development Area into the City of Clovis would be subject to LAFCo approval, and LAFCo's decision is governed by state law (Gov't Code § 56001 et seq.) and the local LAFCo Policies and Procedures. State law requires LAFCo to consider agricultural land and open space preservation in all decisions related to expansion of urban development. LAFCO's definition of Prime Agriculture land refers to California Government Code Section 56064, which is described above.

City of Clovis General Plan

The General Plan includes several policies relevant to agricultural resources. Policies applicable to the Project are identified below:

Policies: Land Use Element

- LU-Policy 4.4. Participate in regional farmland conservation, including the establishment of comprehensive agricultural preserves or easements, through efforts such as the Fresno County Model Farmland Conservation Program or the San Joaquin Valley Greenprint.

- LU-Policy 6.2. Smart growth. The city is committed to the following smart growth goals.

    a. Create a range of housing opportunities and choices;
    b. Create walkable neighborhoods;
    c. Encourage community and stakeholder collaboration;
    d. Foster distinctive, attractive communities with a strong sense of place;
    e. Make development decisions predictable, fair, and cost-effective;
    f. Mix land uses;
    g. Preserve open space, farmland, natural beauty, and critical environmental areas;
    h. Provide a variety of transportation choices;
    i. Strengthen and direct development toward existing communities;
    j. Take advantage of compact building design;
    k. Enhance the economic vitality of the region;
    l. Support actions that encourage environmental resource management.

Policies: Open Space and Conservation Element

- OSC-Policy 2.2. New development. Encourage new development to incorporate on-site natural resources and low impact development techniques.

- OSC-Policy 2.4. Agricultural lands. Preserve the city's agricultural legacy through the Agricultural land use designation, memorialize agricultural history and culture, and facilitate thoughtful conversion of lands to development.

- OSC-Policy 2.5. Right to farm. Support, encourage, and protect agricultural operations within Clovis and recognize their right to farm.

City of Clovis Right to Farm Ordinance

Section 9.40.170 of the Municipal Code establishes the City's "Right to Farm" ordinance, which is intended to provide the City's policy regarding the "right to farm" and contains a subdivider's and owner's disclosure statement, which acknowledges the subdivider's and owner's understanding of the presence of the adjoining agricultural use and the City's policy regarding its right to continue. The ordinance establishes the City's policy to agricultural land consistent with the California Civil Code Section 3482.5 as follows:.

A. Policy of the City.

1. It is the declared policy of the City of Clovis to preserve, protect, and encourage development of its agricultural land consistent with the California Civil Code Section 3482.5, which provides that no agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in operation for more than three (3) years if it was not a nuisance at the time it began.
2. This policy applies to normally acceptable agricultural operations, as defined in the California Civil Code Section 3482.5, and shall not apply if the agricultural activity, operation, facility, or appurtenances thereof obstruct the free passage or use, in the customary manner, of any public park, square, street, or highway.
3. This policy shall not invalidate any provision contained in the Fish and Game Code, Food and Agricultural Code, Health and Safety Code, or Water Code Division 7 (commencing with Section 13000), if the agricultural activity, operation, facility, or appurtenances thereof constitute a nuisance, public or private, as specifically defined or described in any of those provisions.

B. Covenant. If a subdivision is at any point within three hundred feet (300') of land zoned for agricultural uses, the approval of the tentative and final subdivision map or parcel map shall be conditional upon the recordation with the County Recorder of a right-to-farm covenant acknowledging, accepting and complying with this section, in substantially the following wording or similar form:

The undersigned in consideration of recordation of said subdivision by the City of Clovis, do hereby covenant and agree with the declared policy of the City of Clovis (Right-to-Farm Ordinance) to preserve, protect, and encourage development of its agricultural land consistent with the California Civil Code Section 3482.5, which provides that no agricultural activity, operation, or facility, or appurtenances thereof, as defined in the code, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in operation for more than three years if it was not a nuisance at the time it began; that the described property is in or near agricultural districts and that the residents of the property should be prepared to accept the inconveniences and discomfort associated with normal farm activities. This covenant shall run with the land and be binding upon all future owners, heirs, successors, and assigns to the property.

(§ 2, Ord. 14-13, eff. October 8, 2014; § 1(2) (Atts. 1, 2), Ord. 20-18, eff. February 3, 2021. Formerly 9.40.180)

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on agricultural and forest resources if it will:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland zoned Timberland Production (as defined in Public Resources Code section 51104 (g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- 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 forest land to non-forest use.

There are no forest lands or timber lands located within the Clovis Planning Area. There are also no parcels that are currently zoned as forest land, timber, or timber production. Therefore, implementation of the proposed Project would have no impact on forest land, timber, or timber production and this impact will not be discussed further.

METHODOLOGY

Land Evaluation and Site Assessment

The California Land Evaluation and Site Assessment (LESA) Model was utilized in the impact analysis shown below. The formulation of the LESA Model is the result of Senate Bill 850 (Chapter 812 /1993), which charged the California Natural Resources Agency, in consultation with the Governor's Office of Planning and Research, with developing an amendment to Appendix G of the California Environmental Quality Act (CEQA) Guidelines concerning agricultural lands. Such an amendment is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process" (Public Resources Code Section 21095).

The California Agricultural LESA Model is composed of six different factors. Two Land Evaluation factors are based upon measures of soil resource quality. Four Site Assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is

this project score that becomes the basis for making a determination of a project's impact based on the scoring thresholds of significance.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses. (Less than Significant)

Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map and as shown on Figure 3.2-1, to nonagricultural use. However, it is important to consider that the California Department of Conservation includes the following note on their map: "*This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data*." After looking at site-specific characteristics more closely for the Project site, it is noteworthy that the Department of Conservation's designations do not accurately and fully consider site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. To reconcile this inaccuracy and analyze the site-specific characteristics more fully, the Clovis General Plan calls for the use of the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversion. It is noted that the LESA model was developed by the Department of Conservation, which is the same agency that published the 2020 Important Farmland's Map.

The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project is documented on the LESA scoring sheets in Appendix B. The proposed Project has a final LESA score of 50.50, which is considered to be a significant impact only if the Land Evaluation and Site Assessment sub scores are each greater than or equal to 20 points. The proposed Project has a sub score of 32.50 for the Land Evaluation and a sub score of 18.0 for the Site Assessment, which means the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

After evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, it was determined that the conversion of the land on the Project site is not a significant impact. Therefore, implementation of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required.

Impact 3.2-2: The proposed Project has the potential to conflict with existing zoning for agricultural use, or Williamson Act Contracts (Less than Significant)

The Project site is not under a Williamson Act Contract.

Under the Fresno County General Plan, the Development Area is designated for Low Density Residential, with AL-20 (Limited Agricultural) zoning. The Non-Development Area is designated for Rural Residential, with RR (Rural Residential) zoning. Any new development would be done after annexation from the County into the City limits, which would shift any land use and zoning decisions to the City of Clovis. The Fresno Local Agency Formation Commission (LAFCo) will require any land that is annexed into the City limits to be pre-zoned by the City of Clovis in conjunction with the proposed annexation. The proposed pre-zoning is for a Single-Family Planned Residential Development (R-1-PRD) zoning designation over the entire Development Area. The Non-Development Area would not receive a pre-zone since it is not proposed for annexation. Any pre-zoning approved by the City would go into effect upon annexation approval by LAFCo.

The proposed pre-zoning is consistent with the proposed residential uses. Additionally, conversion of the Project site from agricultural to urban uses has been anticipated by the City under the adopted General Plan. Therefore, development of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required.

Impact 3.2-3: The proposed Project has the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands (Less than Significant)

The designated prime farmland immediately west of the Project site has been approved for residential development and has not yet been updated in the FMMP. In the next version of the FMMP that land will be mapped as Urban and Built-Up Land. There is no immediately adjacent agricultural land that poses a potential for conflict. The City's General Plan anticipates that some agricultural lands within the City's Planning Area would ultimately develop with urban uses. Nevertheless, the City has a Right to Farm Ordinance that is intended to reduce the occurrence of any conflict between nonagricultural and agricultural land uses within the City through requiring the transferor of any property in the City to provide a disclosure statement describing that the City permits agricultural operations, including those that utilize chemical fertilizers and pesticides. Development of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required.

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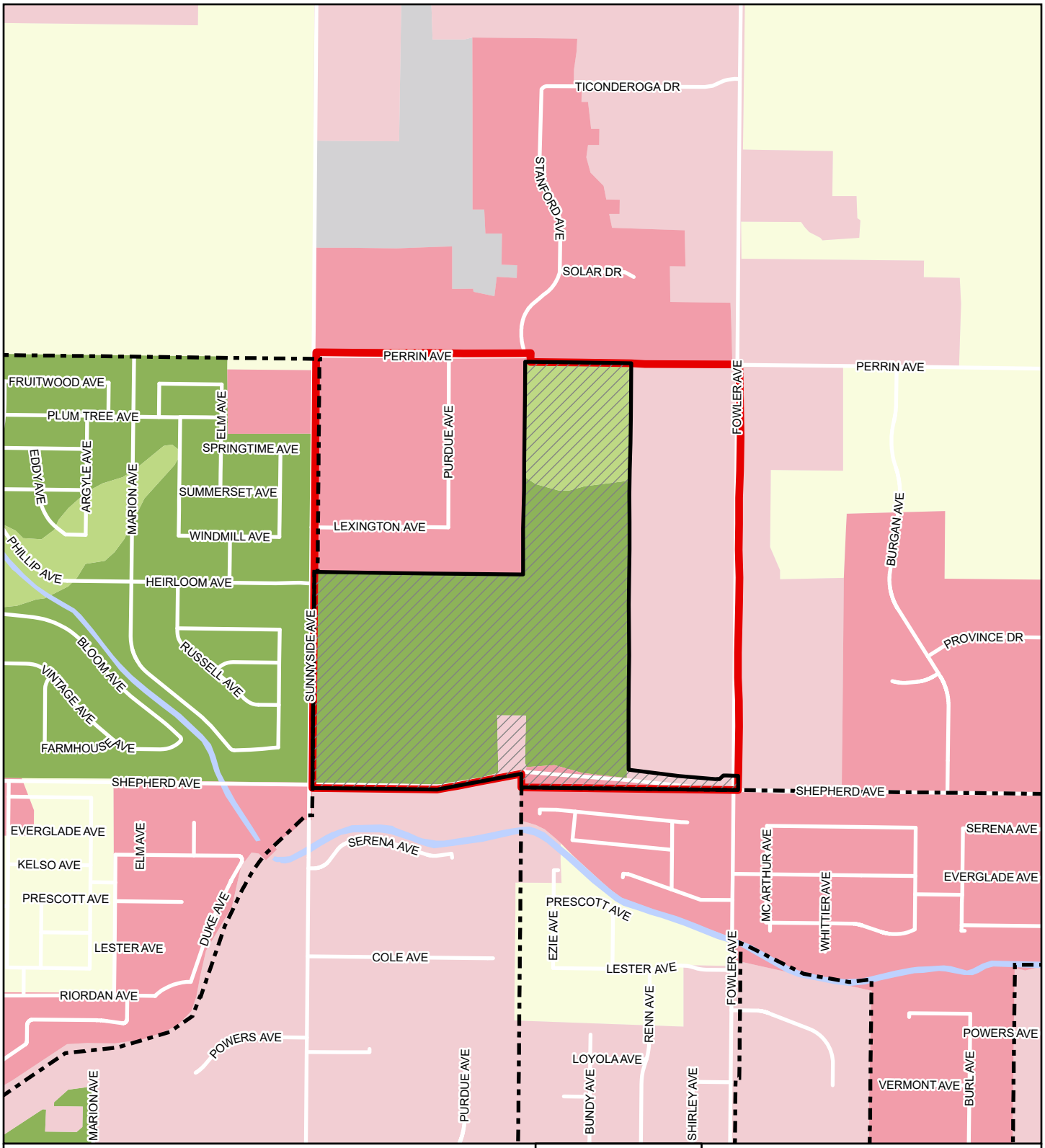

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits
- Prime Farmland
- Farmland of Statewide Importance
- Farmland of Local Importance
- Vacant or Disturbed Land
- Rural Residential Land
- Urban and Built-Up Land

N

0 200 400

Feet

Sources: Fresno County GIS. Farmland Mapping & Monitoring Program. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 3.2-1. Important Farmlands

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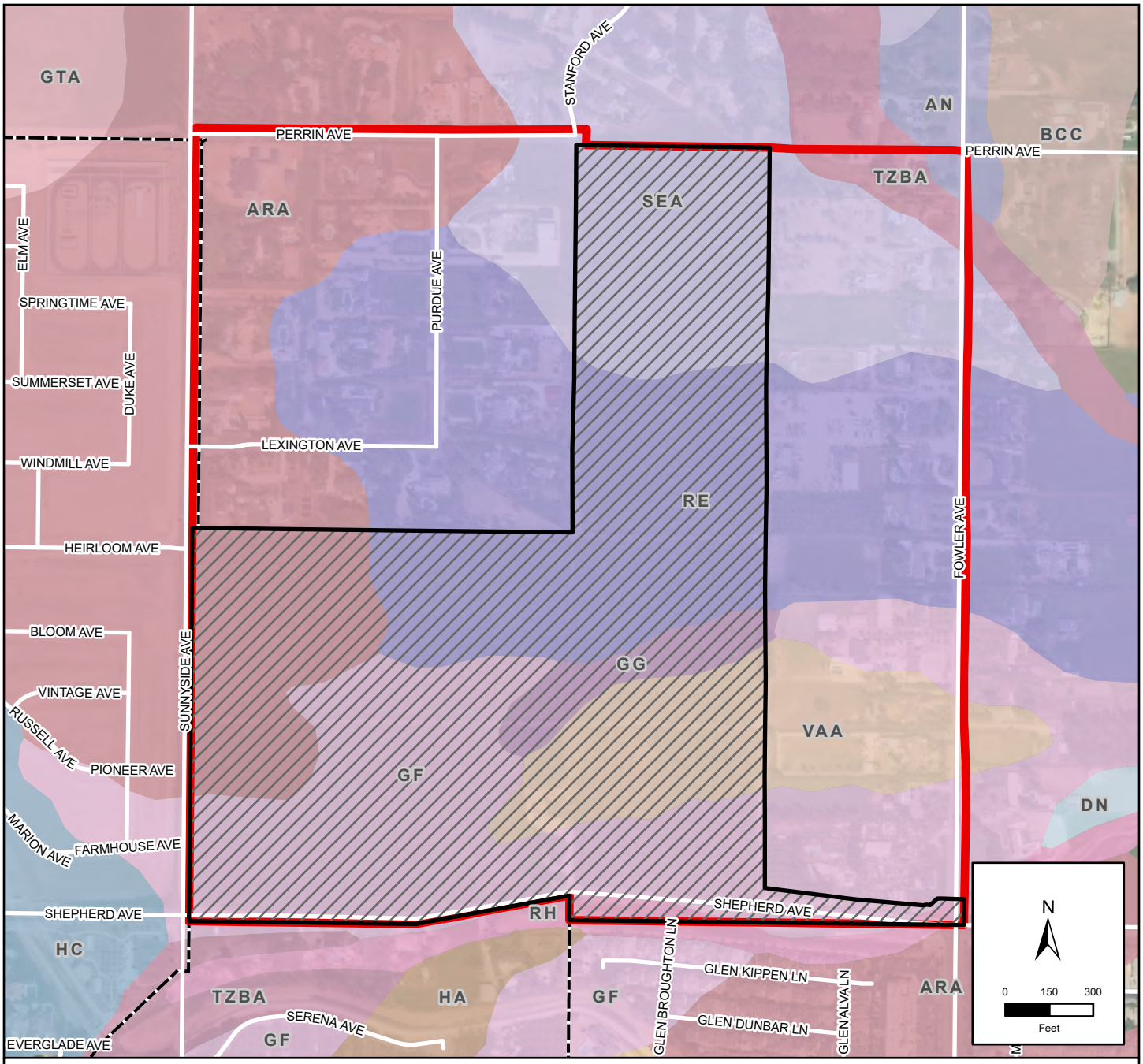

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

NRCS Soil Description

- An - Alamo clay
- AoB - Atwater loamy sand, 3-9 %
- ArA - Atwater sandy loam, 0-3 %
- BcC - Blasingame loam, 3-15 %
- Dn - Dello sandy loam
- Gf - Grangeville fine sandy loam, 0-1 %, MLRA 17
- Gg - Grangeville fine sandy loam, saline alkali
- GtA - Greenfield sandy loam, 0 to 3 %
- Ha - Hanford coarse sandy loam
- Hc - Hanford sandy loam
- Re - Ramona loam, hard substratum
- Rh - Riverwash
- SeA - San Joaquin loam, 0 to 3 %
- TzbA - Tujunga loamy sand, 0 to 3 %
- VaA - Visalia sandy loam, 0 to 3 %

Sources: Fresno County GIS; NRCS Soil Survey. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 3.2-2: Soils Map

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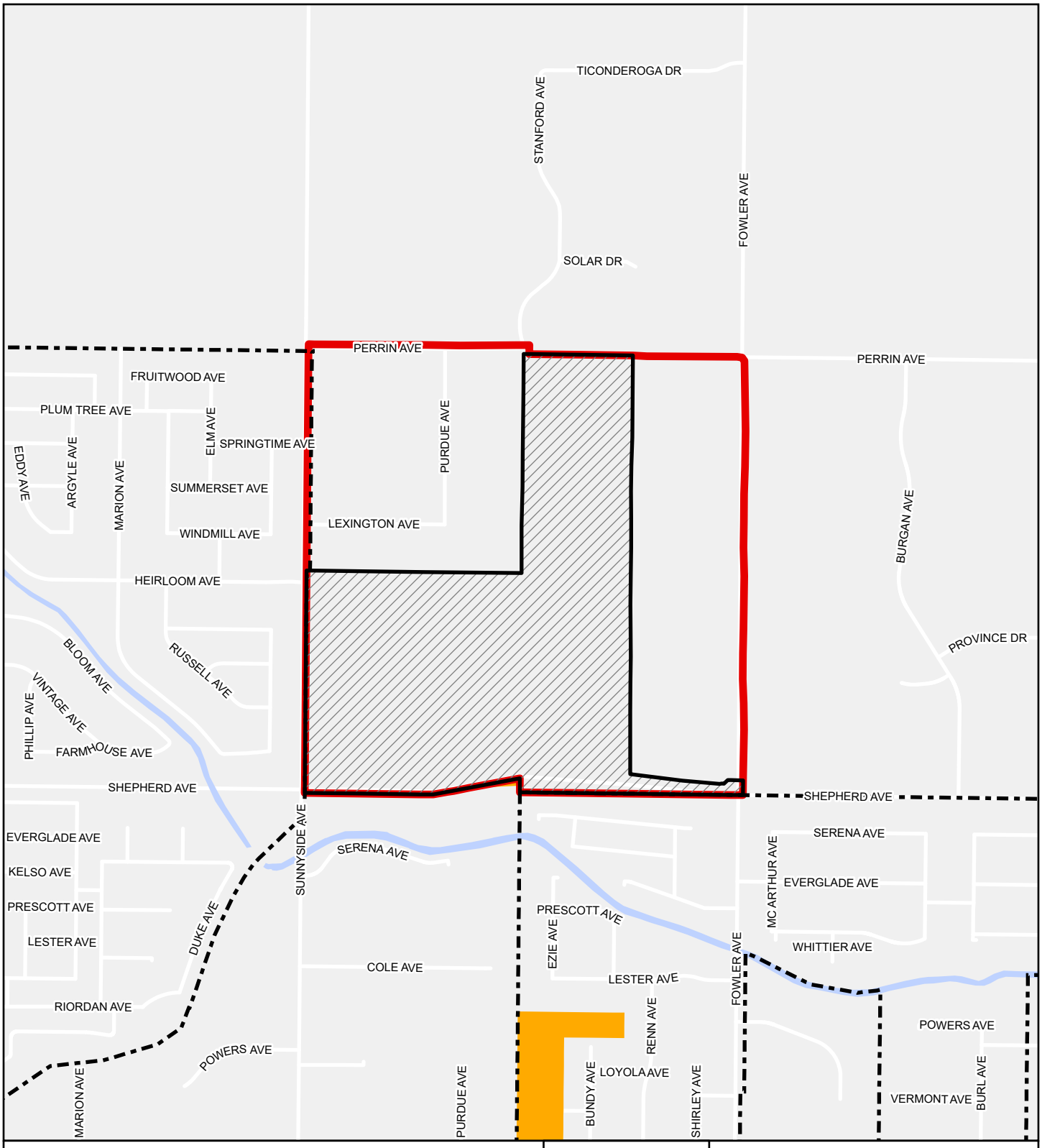

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits
- Williamson Act Non-Renewal

N

0 200 400

Feet

SHEPHERD NORTH PROJECT

Figure 3..2-3. Williamson Act

Notes: Fresno County GIS employees provided a database of Williamson Act lands by parcel number (APN) on June 25th, 2015.
Sources: Fresno County GIS. Data Basin. Map date: May 8, 2023.

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This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a project-level, and covers impacts associated with the conversion of the Development Area to urban uses. Following this discussion is an assessment of consistency of the proposed Project with applicable policies and local plans. The Greenhouse Gases and Climate Change analysis is located in a separate section of this document. This section is based in part on the following technical studies: *Air Quality and Land Use Handbook: A Community Health Perspective* (California Air Resources Board [CARB], 2007), *Guide for Assessing and Mitigation Air Quality Impacts* (San Joaquin Valley Air Pollution Control District [SJAVPCD], 2002), *Guidance for Assessing and Mitigating Air Quality Impacts - 2015* (SJAVPCD, 2015), and CalEEMod *(v.2020.4.0)* (CAPCOA, 2021).

There was one comment received during the Notice of Preparation (NOP) comment period regarding air quality. The comment was provided from the San Joaquin Air Pollution Control District (June 10, 2022). All comments are included in Appendix A.

3.3.1 ENVIRONMENTAL SETTING

SAN JOAQUIN VALLEY AIR BASIN

The City of Clovis (City) is in the central portion of the San Joaquin Air Basin (SJVAB). The SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. 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 (SJVAPCD, 2015).

Climate

The SJVAB is in a Mediterranean climate zone and is 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°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 to 3,000 feet).

Winter-time high pressure events can often last many weeks, with surface temperatures often lowering into the 30°F. 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 (SJVAPCD, 2015).

Wind Patterns

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 transporting it to other locations.

Especially in summer, winds in the San Joaquin Valley most frequently blow from the northwest. 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, over the Tehachapi Pass, into the Southeast Desert Air Basin. This wind pattern contributes to transporting pollutants from the Sacramento Valley and the Bay Area into the SJVAB. Approximately 27 percent of the total emissions in the northern portion, 11 percent of total emissions in the central region, and 7 percent of total emission in the south valley of the SJVAB are attributed to air pollution transported from these two areas.[1] 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 more than one third through the Earth's atmosphere).[2] 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 southeast 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 recirculate a polluted air mass for an extended period.

[1] SJVAPCD. Frequently Asked Questions, http://www.valleyair.org/general_info/frequently_asked_questions.htm#What%20is%20being%20done%20to%20improve%20ai r%20quality%20in%20the%20San%20Joaquin%20Valley, accessed March 3, 2020.

[2] The Sierra Nevada rises to almost 14,000 feet with Mount Humphreys near Bishop, California, while the average height of the atmosphere is about 39,000 feet.

Temperature

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 and remove 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 does not 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 (SJVAPCD, 2015).

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 valley's $PM_{2.5}$ 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 SJVAB 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} (SJVAPCD, 2015).

Inversions

The vertical dispersion of air pollutants in the San Joaquin Valley 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 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 (SJVAPCD, 2015).

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (U.S. EPA) uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, California establishes ambient air quality standards, called California Ambient Air Quality Standards (CAAQS). California law does not require that the CAAQS be met by a specified date as is the case with NAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.3-1) are set to public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the Project are discussed below.

Ozone (O_3) is a photochemical oxidant and the major component of smog. While O_3 in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O_3 at ground level are a major health and environmental concern. O_3 is not emitted directly into the air, but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O_3 levels occur typically during the warmer times of the year. Both ROGs and NO_x are emitted by transportation and industrial sources. ROGs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents. Relatedly, reactive organic compounds (ROG) are defined as the subset of ROGs that are reactive enough to contribute substantially to atmospheric photochemistry.

The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. EPA, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. EPA, 2019b). The average background level of ozone in California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O_3 can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (CARB, 2019a).

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

Nitrogen oxides (NO_x) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO_2 is the increased likelihood of respiratory problems. Under ambient conditions, NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O_3) and acid rain and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase

susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2.

The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO_x). NO_x plays a major role, together with ROGs, in the atmospheric reactions that produce O_3. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO_2) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO_2 emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO_2 is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO_2 affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO_2 is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO_2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO_2 has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO_2 and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO_2 reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter ($PM_{2.5}$). Inhalation exposure to $PM_{2.5}$ has been associated with various cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO_2 levels would lead to increased risk of such effects.

SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other sulfur oxides (SOx). SOx can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO_2 and ROGs are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM_{10} is particulate matter 10

micrometers or less in diameter (known as respirable particulate matter), and $PM_{2.5}$ is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution causes health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM_{10}) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM_{10} causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

$PM_{2.5}$ consists of fine particles, which are less than 2.5 microns in size. Similar to PM_{10}, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM_{10}, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for $PM_{2.5}$.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA, 2019c).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely

affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the U.S. EPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments do not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board (CARB).

AMBIENT AIR QUALITY STANDARDS

Both the U.S. EPA and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and State ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and State ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and State standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone, $PM_{2.5}$, and PM_{10}. The U.S. EPA signed a final rule for the federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, and was effective as of December 28, 2015 (equivalent to the California state ambient air quality eight-hour standard for ozone).

TABLE 3.3-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	*AVERAGING TIME*	*FEDERAL PRIMARY STANDARD*	*STATE STANDARD*
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.03 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	--	20 ug/m^3
	24-Hour	150 ug/m^3	50 ug/m^3
$PM_{2.5}$	Annual	12 ug/m^3	12 ug/m^3
	24-Hour	35 ug/m^3	--
Lead	30-Day Avg.	--	1.5 ug/m^3
	3-Month Avg.	0.15 ug/m^3	--

NOTES: PPM = PARTS PER MILLION, UG/M3 = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019A.

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less ($PM_{2.5}$) were adopted for 24-hour and annual averaging periods. The existing PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within Fresno County and the entire air basin are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the

nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, carbon monoxide, and nitrogen dioxide as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

Fresno County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM_{10} and $PM_{2.5}$. Fresno County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and $PM_{2.5}$. Table 3.3-2 presents the state and national attainment status for Fresno County.

TABLE 3.3-2: STATE AND NATIONAL ATTAINMENT STATUS IN FRESNO COUNTY

CRITERIA POLLUTANTS	*STATE DESIGNATIONS*	*NATIONAL DESIGNATIONS*
Ozone (O_3)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2023.

Fresno County Air Quality Monitoring

The SJVAPCD and the CARB maintain air quality monitoring sites throughout Fresno County that collect data for ozone, $PM_{2.5}$, and PM_{10}. The nearest active air quality monitoring site to the Project site is Clovis-N Villa Avenue. It is important to note that while the State retains the one-hour standard, the federal ozone 1-hour standard was revoked by the U.S. EPA and is no longer applicable for federal standards. Data obtained from the monitoring sites between 2015 and 2018 (latest year of data available) is shown in Table 3.2-3, Table 3.2-4, and Table 3.2-5.

TABLE 3.3-3 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (CLOVIS-N VILLA AVENUE) - OZONE

YEAR	DAYS > STANDARD				1-HOUR OBSERVATIONS			8-HOUR AVERAGES				YEAR COVERAGE	
	STATE		NATIONAL			STATE	NAT'L	STATE		NATIONAL			
	1-HR	8-HR	1-HR	8-HR	MAX.	D.V.[1]	D.V.[2]	MAX.	D.V.[1]	MAX.	D.V.[2]	MIN	MAX
2021	9	37	0	34	0.123	0.11	0.120	0.1	0.095	0.100	0.083	97	98
2020	12	41	2.1	36	0.142	0.11	0.114	0.108	0.095	0.108	0.084	98	99
2019	6	30	0	27	0.103	0.11	0.109	0.080	0.090	0.079	0.084	98	98

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. THE NATIONAL 1-HOUR OZONE STANDARD WAS REVOKED IN JUNE 2005 AND IS NO LONGER IN EFFECT. STATISTICS RELATED TO THE REVOKED STANDARD ARE SHOWN IN ITALICS. D.V. [1]= STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

TABLE 3.3-4: QUALITY MONITORING DATA SUMMARY (CLOVIS-N VILLA AVENUE) – PM_{10}

YEAR	EST. DAYS > STD.		ANNUAL AVERAGE		HIGH 24-HR AVERAGE		YEAR COVERAGE
	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	
2021	No Data	112.4	37.6	43.2	125.0	208.8	95
2020	5.8	117.5	45.8	50.8	180.9	296.0	100
2019	0	65.9	32.5	32.6	150.9	155.7	100

NOTES: THE NATIONAL ANNUAL AVERAGE PM_{10} STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. ND=THERE WAS INSUFFICIENT (OR NO) DATA AVAILABLE TO DETERMINE THE VALUE.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR ADAM) AIR POLLUTION SUMMARIES.

TABLE 3.3-5 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (CLOVIS-N VILLA AVENUE) - $PM_{2.5}$

YEAR	EST. DAYS > NAT'L '06 STD.	ANNUAL AVERAGE		NAT'L ANN. STD. D.V.[1]	STATE ANNUAL D.V.[2]	NAT'L '06 STD. 98TH PERCENTILE	NAT'L '06 24-HR STD. D.V.[1]	HIGH 24-HOUR AVERAGE		YEAR COVERAGE
		NAT'L	STATE					NAT'L	STATE	
2021	22.0	15.1	No Data	No Data	18	49.6	59	104.6	104.6	100
2020	40.0	18.4	18.4	No Data	18	99.5	62	188.0	257.5	99
2019	No Data	No Data	10.2	No Data	18	28.0	45	53.7	53.7	93

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. D.V. [1]= STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR ADAM) AIR POLLUTION SUMMARIES.

ODORS

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety)

to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity, but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, and schools. The closest sensitive receptors to the Project site include existing residences located within the Project site itself (within the Non-Development Area, to the east and north of the Development Area).

3.3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source

emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The U.S. EPA is responsible for administering the FCAA. The FCAA requires the U.S. EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and $PM_{2.5}$ ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

NAAQS standards have been designed to accurately reflect the latest scientific knowledge and are reviewed every five years by a Clean Air Scientific Advisory Committee (CASAC), consisting of seven members appointed by the U.S. EPA Administrator. Reviewing NAAQS is a lengthy undertaking and includes the following major phases: Planning, Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), Policy Assessment (PA), and Rulemaking. The process starts with a comprehensive review of the relevant scientific literature. The literature is summarized and conclusions are presented in the ISA. Based on the ISA, U.S. EPA staff perform a risk and exposure assessment, which is summarized in the REA document. The third document, the PA, integrates the findings and conclusions of the ISA and REA into a policy context, and provides lines of reasoning that could be used to support retention or revision of the existing NAAQS, as well as several alternative standards that could be supported by the review findings. Each of these three documents are released for public comment and public peer review by the CASAC. Members of CASAC are appointed by the U.S. EPA Administrator for their expertise in one or more of the subject areas covered in the ISA. The CASAC's role is to peer review the NAAQS documents, ensure that they reflect the thinking of the scientific community, and advise the Administrator on the technical and scientific aspects of standard setting. Each document goes through two to three drafts before CASAC deems it to be final.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. NAAQS standards were last revised for each of the six criteria pollutant as listed below, with detail on what aspects of NAAQS changed during the most recent update:

- Ozone: On October 1, 2015, the U.S. EPA lowered the national eight-hour standard from 0.075 ppm to 0.070 ppm, providing for a more stringent standards consistent with the current California state standard.
- CO: In 2011, the primary standards were retained from the original 1971 level, without revision. The secondary standards were revoked in 1985.

- NO_2: The national NO_2 standard was most recently revised in 2010 following an exhaustive review of new literature pointed to evidence for adverse effects in asthmatics at lower NO_2 concentrations than the existing national standard.
- SO_2: On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.
- PM: the national annual average $PM_{2.5}$ standard was most recently revised in 2012 following an exhaustive review of new literature pointed to evidence for increased risk of premature mortality at lower $PM_{2.5}$ concentrations than the existing standard.
- Lead: The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. In 2016, the primary and secondary standards were retained.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the U.S. EPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. The CARB is the state agency that is responsible for preparing the California SIP.

Transportation Conformity

Transportation conformity requirements were added to the FCAA in the 1990 amendments, and the U.S. EPA adopted implementing regulations in 1997. See §176 of the FCAA (42 U.S.C. §7506) and 40 CFR Part 93, Subpart A. Transportation conformity serves much the same purpose as general conformity: it ensures that transportation plans, transportation improvement programs, and projects that are developed, funded, or approved by the United States Department of Transportation or that are recipients of funds under the Federal Transit Act or from the Federal Highway Administration (FHWA), conform to the SIP as approved or promulgated by U.S. EPA.

Currently, transportation conformity applies in nonattainment areas and maintenance areas. Under transportation conformity, a determination of conformity with the applicable SIP must be made by the agency responsible for the proposed Project, such as the Metropolitan Planning Organization, the Council of Governments, or a federal agency. The agency making the determination is also responsible for all the requirements relating to public participation. Generally, a project will be considered in conformance if it is in the transportation improvement plan and the transportation improvement plan is incorporated in the SIP. If an action is covered under transportation conformity, it does not need to be separately evaluated under general conformity.

Transportation Control Measures

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically created to address mobile

or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

STATE

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which require auto manufacturers to phase in less polluting vehicles.

California Clean Air Act

The California Clean Air Act (CCAA) was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CARB is the agency responsible for administering the CCAA. The CARB established ambient air quality standards pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards.

California Air Quality Standards

Although NAAQS are determined by the U.S. EPA, states have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards. Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.3-1.

Air quality standard setting in California commences with a critical review of all relevant peer reviewed scientific literature. The Office of Environmental Health Hazard Assessment (OEHHA) uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or can recommend a new standard. The review, including the OEHHA recommendation, is summarized in a document called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the

Air Quality Advisory Committee (AQAC). AQAC members are appointed by the President of the University of California for their expertise in the range of subjects covered in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees, materials, and ecosystems. The Committee provides written comments on the draft ISOR. The ARB staff next revises the ISOR based on comments from AQAC and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board at a regularly scheduled Board hearing.

In June of 2002, the CARB adopted revisions to the PM_{10} standard and established a new $PM_{2.5}$ annual standard. The new standards became effective in June 2003. Subsequently, staff reviewed the published scientific literature on ground-level ozone and nitrogen dioxide and the CARB adopted revisions to the standards for these two pollutants. Revised standards for ozone and nitrogen dioxide went into effect on May 17, 2006 and March 20, 2008, respectively. These revisions reflect the most recent changes to the CAAQS.

Tanner Air Toxics Act (TACs)

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted U.S. EPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technologies (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, CARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

Omnibus Low-NOx Rule

The CARB approved the Omnibus Low-NOx Rule on August 28, 2020, which will require engine NOx emissions to be cut to approximately 75% below current standards beginning in 2024, and 90% below current standards in 2027. The rule also places nine additional regulatory requirements on new heavy-duty truck and engines. Those additional requirements include a 50% reduction in

particulate matter emissions, stringent new low-load and idle standards, a new in-use testing protocol, extended deterioration requirements, a new California-only credit program, and extended mandatory warranty requirements. The regulatory requirements in the Omnibus Low-NOX Rule will first become effective in 2024, at the same time as the Advanced Clean Trucks regulations that CARB approved that mandates manufacturers convert increasing percentages of their heavy-duty trucks sold in California to zero-emission vehicles.

Assembly Bill 170

Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003, creating Government Code Section 65302.1, which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies, and feasible implementation strategies designed to improve air quality. The elements to be amended include, but are not limited to, those elements dealing with land use, circulation, housing, conservation, and open space. Section 65302.1.c identifies four areas of air quality discussion required in these amendments:

- A report describing local air quality conditions, attainment status, and state and federal air quality and transportation plans;
- A summary of local, district, state, and federal policies, programs, and regulations to improve air quality;
- A comprehensive set of goals, policies, and objectives to improve air quality; and
- Feasible implementation measures designed to achieve these goals.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to air quality. General Plan goals and policies applicable to the Project are identified below:

Policies: Circulation Element

- Goal 1: A context-sensitive and "complete streets" transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs.
- Policy 1.1: Multimodal network. The city shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.
- Policy 1.2: Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
- Policy 1.3: Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
- Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.
- Policy 1.5: Neighborhood connectivity. The transportation network shall provide

multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).

- Policy 1.6: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
- Policy 1.7: Narrow streets. The City may permit curb-to-curb dimensions that are narrower than current standards on local streets to promote pedestrian and bicycle connectivity and enhance safety.
- Policy 1.8: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate.
- Goal 4: A bicycle and transit system that serves as a functional alternative to commuting by car.
- Policy 4.1: Bike and transit backbone. The bicycle and transit system should connect Shaw Avenue, Old Town, the Medical Center/R&T Park, and the three Urban Centers.
- Policy 4.2: Priority for new bicycle facilities. Prioritize investments in the backbone system over other bicycle improvements.
- Policy 4.3: Freeway crossings. Require separate bicycle and pedestrian crossings for new freeway extensions and encourage separate crossings where Class I facilities are planned to cross existing freeways.
- Policy 4.4: Bicycles and transit. Coordinate with transit agencies to integrate bicycle access and storage into transit vehicles, bus stops, and activity centers.
- Policy 4.5: Transit stops. Improve and maintain safe, clean, comfortable, well-lit, and rider-friendly transit stops that are well marked and visible to motorists.
- Policy 4.6: Transit priority corridors. Prioritize investments for, and transit services and facilities along the transit priority corridors.
- Policy 4.7: Bus rapid transit. Plan for bus rapid transit and transit-only lanes on transit priority corridors as future ridership levels increase.
- Goal 5: A complete system of trails and pathways accessible to all residents.
- Policy 5.1: Complete street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety, consistent with the Bicycle Transportation Master Plan and other master plans.
- Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
- Policy 5.3: Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
- Policy 5.4: Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
- Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.

- Goal 6: Safe and efficient goods movement with minimal impacts on local roads and neighborhoods.
- Policy 6.1: Truck routes. Plan and designate truck routes that minimize truck traffic through or near residential areas.
- Policy 6.2: Land use. Place industrial and warehousing businesses near freeways and truck routes to minimize truck traffic through or near residential areas.

Policies: Air Quality Element

- Goal 1: A local environment that is protected from air pollution and emissions.
- Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.
- Policy 1.2: Sensitive Land Uses. Prohibit, without sufficient mitigation, the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board.
- Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
- Policy 1.4: City buildings. Require that municipal buildings be designed to exceed energy and water conservation and greenhouse gas reduction standards set in the California Building Code.
- Policy 1.5: Fleet operations. Purchase low- or zero-emission vehicles for the city's fleet where feasible. Use clean fuel sources for city-owned mass transit vehicles, automobiles, trucks, and heavy equipment where feasible.
- Policy 1.6: Alternative fuel infrastructure. Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.
- Policy 1.7: Employment measures. Encourage employers to provide programs, scheduling options, incentives, and information to reduce vehicle miles traveled by employees.
- Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
- Goal 2: A region with healthy air quality and lower greenhouse gas emissions.
- Policy 2.1: Regional coordination. Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.
- Policy 2.2: Cross-jurisdictional issues. Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.
- Policy 2.3: Valleywide programs. Establish parallel air quality programs and implementation measures with other communities across the San Joaquin Valley.
- Policy 2.4: Public participation. Encourage participation of local citizens, the business community, and interested groups and individuals in air quality planning and implementation.
- Policy 2.5: Public education. Promote programs that educate the public about regional air quality issues and solutions.

- Policy 2.6: Innovative mitigation. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.

City of Clovis Municipal Code

Chapter 9.22 of the Clovis Municipal Code describes performance standards for air quality (consistent with rules and regulations of the U.S. EPA, CARB, and the SJVAPCD). Chapter 8.18 of the Municipal Code describes expedited permitting procedures for electric vehicle charging stations. Furthermore, Chapter 8.14 of the Municipal Code describes the permitting requirements for small residential rooftop solar energy systems within the City. Additionally, Chapter 8.1. provides the City's Building Code, which provides standards for energy efficiency for buildings within the City.

San Joaquin Valley Air Pollution Control District

The primary role of SJVAPCD is to develop plans and implement control measures in the SJVAB to control air pollution. These controls primarily affect stationary sources such as industry and power plants. Rules and regulations have been developed by SJVAPCD to control air pollution from a wide range of air pollution sources. SJVAPCD also provides uniform procedures for assessing potential air quality impacts of proposed projects and for preparing the air quality section of environmental documents.

AIR QUALITY PLANNING

The U.S. EPA requires states that have areas that do not meet the National AAQS to prepare and submit air quality plans showing how the National AAQS will be met. If the states cannot show how the National AAQS will be met, then the states must show progress toward meeting the National AAQS. These plans are referred to as the State Implementation Plans (SIP). California's adopted 2007 State Strategy was submitted to the U.S. EPA as a revision to its SIP in November 2007.[3] More recently, in October 2018, the CARB adopted the 2018 Updates to the California State Implementation Plan.

In addition, the CARB requires regions that do not meet California AAQS for ozone to submit clean air plans (CAPs) that describe measures to attain the standard or show progress toward attainment. To ensure federal CAA compliance, SJVAPCD is currently developing plans for meeting new National AAQS for ozone and $PM_{2.5}$ and the California AAQS for PM_{10} in the SJVAB (for California CAA compliance)[4]. The following describes the air plans prepared by the SJVAPCD, which are incorporated by reference per CEQA Guidelines Section 15150.

1-HOUR OZONE PLAN

Although U.S. EPA revoked its 1979 1-hour ozone standard in June 2005, many planning

[3] Note that the plan was adopted by CARB on September 27, 2007; California Air Resources Board. 2007. California Air Resources Board's Proposed State Strategy for California's 2007 State Implementation Plan.
[4] SJVAPCD, 2012. 2012 $PM_{2.5}$ Plan, December 20.

requirements remain in place, and SJVAPCD must still attain this standard before it can rescind CAA Section 185 fees. The SJVAPCD's most recent 1-hour ozone plan, the 2013 Plan for the Revoked 1-hour Ozone Standard, demonstrated attainment of the 1-hour ozone standard by 2017. However, on July 18, 2016, the U.S. EPA published in the Federal Register a final action determining that SJVAB has attained the 1-hour ozone NAAQS based on the 2012 to 2014 three-year period allowing nonattainment penalties to be lifted under federal Clean Air Act section 179b (SJVAPCD, 2015).

8-HOUR OZONE PLAN

The SJVAPCD's Governing Board adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard as set by U.S. EPA in 1997. The plan projects that the valley will achieve the 8-hour ozone standard for all areas of the SJVAB no later than 2023. The CARB approved the plan on June 14, 2007. The U.S. EPA approved the 2007 Ozone Plan effective April 30, 2012. SJVAPCD adopted the 2016 Ozone Plan to address the federal 2008 8-hour ozone standard, which must be attained by end of 2031.[5,6]

PM_{10} PLAN

Based on PM_{10} measurements from 2003 to 2006, the U.S. EPA found that the SJVAB has reached federal PM_{10} standards. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM_{10} Maintenance Plan and Request for Redesignation. This plan demonstrates that the valley will continue to meet the PM_{10} standard. U.S. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance (SJVAPCD, 2015).

PM2.5 PLAN

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018.[7] This plan addresses the U.S. EPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable (SJVAPCD, 2020).

All of the above-referenced plans include measures (i.e., federal, state, and local) that would be implemented through rule making or program funding to reduce air pollutant emissions in the SJVAB. Transportation control measures are part of these plans.

SJVAPCD RULES AND REGULATIONS

[5] SJVAPCD. Ozone Plans. http://www.valleyair.org/ Air_Quality_Plans/Ozone_Plans.htm, accessed March 3, 2020.

[6] SJVAPCD. 2016 Plan for the 2008 8-Hour Ozone Standard, http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed March 3, 2020.

[7] SJVAPCD. Particulate Matter Plans. http://valleyair.org/Air_Quality_Plans/PM_Plans.htm, accessed March 9, 2020.

SJVAPCD Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., ROG and NOx) and PM_{10} emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout would include any one of the following:

- 50 residential units.
- 2,000 square feet of commercial space.
- 25,000 square feet of light industrial space.
- 100,000 square feet of heavy industrial space.
- 20,000 square feet of medical office space.
- 39,000 square feet of general office space.
- 9,000 square feet of educational space.
- 10,000 square feet of government space.
- 20,000 square feet of recreational space.
- 9,000 square feet of space not identified above.
- Transportation/transit projects with construction exhaust emissions of two or more tons of NOx or two or more tons of PM_{10}.
- Residential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, regardless of the number of tract maps, and has the capability of accommodating more than 50 residential units.
- Nonresidential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, and has the capability of accommodating development projects that emit two or more tons per year of NOx or PM_{10} during project operations.

The rule requires all subject, nonexempt projects to mitigate both construction and operational period emissions by (1) applying feasible SJVAPCD-approved mitigation measures, or (2) paying any applicable fees to support programs that reduce emissions. Off-site emissions reduction fees (off-site fee) are required for projects that do not achieve the required emissions reductions through on-site emission reduction measures. Phased projects can defer payment of fees in accordance with an Off-site Emissions Reduction Fee Deferral Schedule (FDS) approved by the SJVAPCD.

To determine how an individual project would satisfy Rule 9510, each project would submit an air quality impact assessment (AIA) to the SJVAPCD as early as possible, but no later than prior to the project's final discretionary approval, to identify the project's baseline unmitigated emissions inventory for indirect sources: on-site exhaust emissions from construction activities and operational activities from mobile and area sources of emissions (excludes fugitive dust and permitted sources). Rule 9510 requires the following reductions, which are levels that the SJVAPCD has identified as necessary, based on their air quality management plans, to reach attainment for

ozone and particulate matter:

Construction Equipment Emissions

The exhaust emissions for construction equipment greater than 50 horsepower (hp) used or associated with the development project shall be reduced by the following amounts from the statewide average as estimated by CARB:

- 20 percent of the total NOx emissions
- 45 percent of the total PM_{10} exhaust emissions

Mitigation measures may include those that reduce construction emissions on-site by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

Operational Emissions

- NOx Emissions. Applicants shall reduce 33.3 percent of the project's operational baseline NOx emissions over a period of 10 years as quantified in the approved AIA.
- PM_{10} Emissions. Applicants shall reduce of 50 percent of the project's operational baseline PM_{10} emissions over a period of 10 years as quantified in the approved AIA.

These requirements listed above can be met through any combination of on-site emission reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable off-site fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Fugitive PM_{10} Prohibitions

SJVAPCD controls fugitive PM_{10} through Regulation VIII, Fugitive PM_{10} Prohibitions. The purpose of this regulation is to reduce ambient concentrations of PM_{10} and $PM_{2.5}$ by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

- Regulation VIII, Rule 8021 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the site.
- Regulation VIII, Rule 8031 applies to the outdoor handling, storage, and transport of any bulk material.
- Regulation VIII, Rule 8041 applies to sites where carryout or trackout has occurred or may occur on paved roads or the paved shoulders of public roads.
- Regulation VIII, Rule 8051 applies to any open area having 0.5 acre or more within urban areas or 3.0 acres or more within rural areas, and contains at least 1,000 square feet of disturbed surface area.
- Regulation VIII, Rule 8061 applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.
- Regulation VIII, Rule 8071 applies to any unpaved vehicle/equipment traffic area.
- Regulation VIII, Rule 8081 applies to off-field agricultural sources.

Sources regulated are required to provide Dust Control Plans that meet the regulation requirements. Under Rule 8021, a Dust Control Plan is required for any residential project that will include 10 or more acres of disturbed surface area, a nonresidential project with 5 or more acres of disturbed surface area, or a project that relocates 2,500 cubic yards per day of bulk materials for at least three days. The Dust Control Plan is required to be submitted to SJVAPCD prior to the start of any construction activity. The Dust Control Plan must also describe fugitive dust control measure to be implemented before, during, and after any dust-generating activity. For sites smaller than those listed above, the project is still required to notify SJVAPCD a minimum of 48 hours prior to commencing earthmoving activities.

National Emission Standards for Hazardous Air Pollutants

Rule 4002 applies in the event an existing building will be renovated, partially demolished or removed (National Emission Standards for Hazardous Air Pollutants); this rule applies to all sources of Hazardous Air Pollutants.

Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Nuisance Odors

SJVAPCD controls nuisance odors through implementation of Rule 4102, Nuisance. Pursuant to this rule, "a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property."

Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NOx, ROG, and particulate matter (PM_{10} and $PM_{2.5}$). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

CRITERIA POLLUTANT EMISSIONS MODELING

California Emission Estimator Model (CalEEMod)™ (v.2020.4.0), developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with California air districts, was used to estimate emissions for the proposed Project. Project buildout was assumed to be completed in 2028, consistent with the Transportation Impact Analysis, prepared by LSA (LSA, 2023). This may prove to be a conservative estimate because criteria pollutant emission rates are reduced over time (due to state and federal mandates) and would be expected to be even lower than reported in this analysis, should the Project buildout be completed after 2028.

The assumptions for the modeling were selected on a best-fit basis and are consistent with the information provided in Chapter 2.0: Project Description. The land uses modeled include: Single Family Housing – (605 dwelling units); and Open Space – (approximately 5.54 acres). Vehicle trip rates and trip lengths estimated in the modeling are consistent with the vehicle trips rates included in the modeling developed by LSA. The construction phase includes site preparation, grading, building construction, paving, and architectural coating phases. See Appendix C for further detail.

IMPACTS RELATED TO PROJECT-GENERATED POLLUTANTS OF HUMAN HEALTH CONCERN

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704) (hereafter referred to as the Friant Ranch Decision). The case reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Friant Ranch development. The Friant Ranch Project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin. The Court found that the air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The Court's decision clarifies that the agencies authoring environmental documents must make reasonable efforts to connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

All criteria pollutants that would be generated by the Project are associated with some form of health risk (e.g., asthma). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and lead (Pb) are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (ROG and NO_x) and PM (including Diesel PM). The lead agency has determined that, given the nature and size of the Project, a qualitative approach to correlating the expected air quality emissions of Projects to the likely health consequences of the increased emissions is appropriate.

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutants may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the Project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution to specific health outcomes on a regional scale would be very minimal, given the size of the Project. Therefore, a quantitative correlation of Project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

Other Pollutants of Human Health Concern

The impact analysis does not directly evaluate airborne lead. Neither construction nor future operations would generate quantifiable lead emissions because of regulations that require unleaded

fuel and that prohibit lead in new building materials.

TAC emissions associated with Project construction that could affect surrounding areas are evaluated qualitatively. The potential for the Project operations to expose residents to TAC emissions that would exceed applicable health standards is analyzed qualitatively.

Lastly, the SJVPACD recommends that odor impacts be addressed in a qualitative manner. Such an analysis must determine if the Project would result in excessive nuisance odors, as defined under the SJVAPCD's Rule 4102 and California Code of Regulations, Health and Safety Code Section 41700, Air Quality Public Nuisance.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Project operation has the potential to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Less than Significant)

The SJVAPCD is tasked with implementing programs and regulations required by the Federal Clean Air Act and the California Clean Air Act. In that capacity, the SJVAPCD has prepared plans to attain Federal and State ambient air quality standards. To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions in their *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts* (2015). Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

The proposed Project would be both a direct and indirect source of air pollution. Direct sources of pollution include area, energy, and water and waste sources, due to development of the on-site buildings and associated infrastructure. Indirect sources of pollution would be due to the generation of trips of from vehicles traveling to and from the Project site.

CalEEMod™ (v.2020.4.0) was used to model operational emissions of the proposed Project. Table 3.3-6 shows proposed Project emissions as provided by CalEEMod. The SJVAPCD provides a list of applicable air quality emissions thresholds.

TABLE 3.3-6: OPERATIONAL PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
EMISSIONS	20.8	3.6	7.4	<0.1	4.1	1.2
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. The SJVAPCD has established operations related emissions thresholds of significance as follows: 100 tons per year of carbon monoxide (CO,

10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of sulfur oxides (SO_x), 15 tons per year particulate matter of 10 microns or less in size (PM_{10}), and 15 tons per year particulate matter of 2.5 microns or less in size ($PM_{2.5}$). If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. As shown in Table 3.3-6 above, operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

PROJECT EFFECTS ON PUBLIC HEALTH

Fresno County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. The SJVAPCD developed these Project-level thresholds based on the emissions that would exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS. Ambient levels of these criteria pollutants are likely to decrease in the future, based on current and future implementation of federal and/or state regulatory requirements, such as improvements to the statewide vehicle fleet over time (including the long-term replacement of internal combustion engine vehicles with electric vehicles in coming decades).

Ozone

O_3 is not emitted directly into the air, but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) (also known as ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency, 2019b).

The Project would generate emissions of ROG and NO_x during Project operational activities, as shown in Table 3.3-6. Although the exact effects of Project-level emissions on local health are not

precisely known, it is likely that the increases in ROG and NO_x generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the proposed Project in comparison to Fresno County as a whole. Instead, the increases in ROG and NO_x generated by the proposed Project when combined with the existing ROG and NO_x emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

Particulate Matter

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, PM can cause major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency, 2019c).

The Project would generate emissions of PM during Project operational activities, as shown in Table 3.3-6. Although the exact effects of such emissions on local health are not known, it is likely that the increases in PM generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the Project in comparison the Fresno County as a whole. Instead, the increases in PM generated by the proposed Project when combined with the existing PM emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

CONCLUSION

As shown in Table 3.3-6, the proposed Project's operational criteria pollutant would not exceed the applicable SJVAPCD thresholds of significance. Therefore, the Project's criteria pollutant emissions would be considered to have a **less than significant** impact.

Impact 3.3-2: Proposed Project construction activities would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Less than Significant)

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related activities would result in Project-generated emissions from demolition, site preparation, grading, paving, building construction, and architectural coatings. CalEEMod™ (v.2020.4.0) was used to estimate construction emissions for the proposed Project. Table 3.3-7, below, provides the construction criteria pollutant emissions associated with implementation of the proposed Project.

TABLE 3.3-7: MAXIMUM CONSTRUCTION PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
EMISSIONS	3.3	3.0	3.5	<0.1	1.2	0.5
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions. As shown in Table 3.3-7, Project maximum construction emissions would not exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related control measures in accordance with their rules and regulations. Implementation of these control measures (provided in further detail below) would further reduce proposed Project construction related emissions to the extent possible.

The first step is to prepare a Dust Control Plan that meets all of the applicable requirements of APCD Rule 8021. All construction activities are required to implement dust control measures, as required by APCD Rules 8011-8081, to limit Visible Dust Emissions to 20% opacity or less. Dust control measures include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites as required by the applicable rules. The following dust control practices are identified in Tables 6-2 and 6-3 of the GAMAQI (2002):

a. *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.*
b. *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
c. *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking.*
d. *When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.*
e. *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.*
f. *Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.*
g. *Limit traffic speeds on unpaved roads to 15 mph.*
h. *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.*

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions.

CONCLUSION

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a **less than significant** impact.

Impact 3.3-3: The proposed Project would not generate carbon monoxide hotspot impacts. (Less than Significant)

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels could increase the risk of such incidences.

The Project site is located in a State attainment area and a federal attainment-unclassified area for carbon monoxide. In addition, CO emissions under Project operation are below the applicable significance threshold promulgated by the SJVAPCD. Therefore, no project-level conformity analysis is necessary for CO. Increases in proposed Project VMT would increase concentrations of carbon monoxide (CO) along streets and intersections that provide access to the Project site. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources), and can form local elevated concentrations under specific conditions. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations (i.e., hotspots), therefore, are usually only found near areas of very high traffic volume and congestion.

Several factors combine to make substantial concentrations of carbon monoxide unlikely. Existing physical constraints such as high-density, high-profile buildings or other obstructions that could prevent dispersion of carbon monoxide are largely absent. Predominant weather conditions in the area include air movement that would help facilitate carbon monoxide dispersion. Congested traffic conditions that otherwise could result in concentration of carbon monoxide would be of short duration. Further, under existing regulatory and legislative mandates, emissions volumes from all vehicles classes will continue to decline. Given these factors, substantial concentrations of carbon monoxide are not expected at or along any affected roadways or intersections.

CONCLUSION

This Project is located in an area that is designated attainment and attainment-unclassified for carbon monoxide. No Project-level conformity analysis is necessary for CO. Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Impacts associated with carbon monoxide hotspots would be **less than significant,** and no additional mitigation is required.

Impact 3.3-4: The proposed Project has the potential for public exposure to toxic air contaminants. (Less than Significant)

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. EPA regulate 188 air toxics, also known as hazardous air pollutants. The U.S. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, the U.S. EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999

National Air Toxics Assessment. These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The 2007 U.S. EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050. California maintains stricter standards for clean fuels and emissions compared to the national standards, therefore, it is expected that MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 3.3-8 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

TABLE 3.3-8: CARB MINIMUM SEPARATION RECOMMENDATIONS ON SITING SENSITIVE LAND USES

SOURCE CATEGORY	*ADVISORY RECOMMENDATIONS*
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

Residences are proposed as part of the Project, which are considered traditional sensitive receptors. However, the residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, since the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs, the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.3-5: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Less than Significant)

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. The general nuisance rule (Health and Safety Code §41700) is the basis for the threshold.

Examples of facilities that are known producers of odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant.

If a project proposes to locate receptors and known odor sources in proximity to each other, further analysis may be warranted. However, if a project would not locate receptors and known odor sources in proximity to each other, then further analysis is not warranted. The proposed Project does not include new industrial uses that are not already present in the vicinity of the Project site. Air district Rule 402 prohibits any mobile or stationary source generating an objectionable odor, with the exception of odors emanating from certain agricultural operations. The California Health and Safety Code §41700 and Air District Rule 402 prohibit emissions of air contaminants from any source that cause nuisance or annoyance to a considerable number of people or that present a threat to public health or cause property damage. Compliance with these rules would preclude land uses proposed under the proposed Project from emitting objectionable odors.

CONCLUSION

The proposed Project does not propose sensitive receptors that would be exposed to odors in the vicinity; nor does it propose uses that would create new odors that would expose substantial numbers of people. Therefore, operation of the proposed Project would not result in significant objectionable odors. Impacts associated with exposure to odors would be **less than significant.**

This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the Development Area to an urban use. This section is based in part on the following: *2014 Clovis General Plan* (Placeworks, 2014), *2014 Clovis General Plan Draft Program Environmental Impact Report* (Placeworks, 2014), *Natural Resources Conservation Service (NRCS) Web Soil Survey* (NRCS, 2022), *Biological Habitat Assessment of the Tract 6205, Spensley Property, N. Sunnyside and Shepherd Avenue, Clovis, Fresno County, California* (Argonaut Ecological Consulting, Inc., 2018) (see Appendix D), as well as site specific surveys and analysis.

There was one comment received during the Notice of Preparation (NOP) comment period regarding biological resources from Robert Shuman (May 25, 2022). The commenter states that the on-site orchards are suitable for foraging by Swainson's hawk and other raptors. The commenter also notes that there are active, well-documented Swainson's hawk nests within ¼ mile radius of the proposed Project site.

KEY TERMS

The following key terms are used throughout this section to describe biological resources and the framework that regulates them:

Hydric Soils. One of the three wetland identification parameters, according to the Federal definition of a wetland, hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season. There are approximately 2,000 named soils in the United States that may occur in wetlands.

Hydrophytic Vegetation. Plant types that typically occur in wetland areas. Nearly 5,000 plant types in the United States may occur in wetlands. Plants are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS) and include such species as cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads, and water plantains.

Sensitive Natural Community. A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or Federal agencies. The California Environmental Quality Act (CEQA) identifies the elimination or substantial degradation of such communities as a significant impact. The California Department of Fish and Wildlife (CDFW) tracks sensitive natural communities in the California Natural Diversity Database (CNDDB).

Special-Status Species. Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by Federal, State, or other agencies. Some of these species receive specific protection that is defined by Federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to

collectively as "special status species" in this report, following a convention that has developed in practice, but has no official sanction. For the purposes of this assessment, the term “special status” includes those species that are:

- Federally listed or proposed for listing under the Federal Endangered Species Act (50 CFR 17.11-17.12);
- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);
- State listed or proposed for listing under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the USFWS or the CDFW as a species of concern (USFWS), rare (CDFW), or of special concern (CDFW);
- Fully protected animals, as defined by the State of California (California Fish and Game Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.); and
- Plants listed by the California Native Plant Society (CNPS) as rare, threatened, or endangered (List 1A and List 2 status plants in Skinner and Pavlik 1994).

Waters of the U.S. The Federal government defines waters of the U.S. as "lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows" [33 C.F.R. §328.3(a)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the U.S. Army Corps of Engineers (USACE) as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

Wetlands. Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The Federal government defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Wetlands require wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to waters of the U.S.

METHODS

Pre-Field Investigation

Prior to the field investigation, numerous maps, databases, and reports were reviewed including:

- U.S. Geological Survey (USGS) 7.5-minute Quadrangle
- USGS National Hydrography Data Set
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps
- National Resource Conservation Service (NRCS) Soil Survey

- California Wildlife Habitat Relationships (CWHR) maps
- California Natural Diversity Database (CNDDB)
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants
- U.S. Fish and Wildlife Service's (USFWS) IPac
- U.S. Fish and Wildlife Service's (USFWS) Official List

Field Surveys

The Development Area was subject to a field survey by Principal Biologist Steve McMurtry (De Novo Planning Group) on May 11, 2021. The site reconnaissance survey served several purposes. First, it served as reconnaissance of the site to establish the existing conditions of the site and to verify information gathered in the pre-field investigation. This included identification of the habitat types, hydrologic features, topography, soil characteristics, and vegetation. The field investigations followed the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). Habitat was recorded. Visibility during the survey was excellent.

Additionally, as part of the *Biological Habitat Assessment of the Tract 6205, Spensley Property, N. Sunnyside and Shepherd Avenue, Clovis, Fresno County, California* (Argonaut Ecological Consulting, Inc., 2018), a site review was conducted on October 23, 2017. The entire Development Area was reviewed. There were no access issues. The primary objective of the field work was to identify any areas on the site, or immediately adjacent to the site, that potentially supports habitat for sensitive species or aquatic habitat. The orchard manager provided historical and current information on the farming operations.

3.4.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCES/BIOREGION

The City of Clovis is located in the western portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada Range on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is located just north and west of the City. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

The City of Clovis is located within the San Joaquin Valley Bioregion, which is comprised of Kings County, most of Fresno, Kern, Merced, and Stanislaus counties, and portions of Madera, San Luis Obispo, and Tulare counties. The San Joaquin Valley Bioregion is the third most populous out of ten bioregions in the State, with an estimated two million people. The largest cities are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route 99 are the major north-south roads that run the entire length of the bioregion.

The bioregion is bordered on the west by the coastal mountain ranges. Its eastern boundary joins the southern two-thirds of the Sierra bioregion, which features Yosemite, Kings Canyon, and Sequoia National Parks. At its northern end, the San Joaquin Valley bioregion borders the southern end of

the Sacramento Valley bioregion. To the west, south, and east, the bioregion extends to the edges of the valley floor.

Habitat in the bioregion includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about five percent. Remnants of the wetland habitats are protected in this bioregion in publicly owned parks, reserves, and wildlife areas. The bioregion is considered the State's top agricultural producing region with the abundance of fertile soil.

LOCAL SETTING

Location

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-4 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

Topography

The Project site is relatively flat and is approximately 385 feet above mean sea level.

Climate

Climate in the Development Area is typical of the central San Joaquin Valley with summers that are long, hot, and dry and winters that are cool and mild. Rainfall in the winter averages approximately 10.9 inches per year, falling mainly between November and April.

Vegetation

Vegetation on the Project site consists of agricultural, ruderal, and orchard. The majority of the Development Area is in active agricultural use (pecan orchards). Because of the active agricultural use over the majority of the Project site, there is very limited natural vegetation on the Project site. Common plant species observed in the perimeter of the agricultural fields include: wild oat (*Avena barbata*), rip-gut brome (*Bromus diandrus*), softchess (*Bromus hordeaceus*) alfalfa (*Medicago sativa*), Russian thistle (*Salsola tragus*), Italian thistle (*Carduus pycnocephalus*), rough pigweed (*Amaranthus retroflexus*), sunflower (*Helianthus annuus*), tarragon (*Artemisia dracunculus*), coyote brush (*Baccharis pilularis*), prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), sow thistle (*Sonchus asper*), telegraph weed (*Heterotheca grandiflora*), barley (*Hordeum* sp.), mustard (*Brassica niger*), and heliotrope (*Heliotropium curassavicum*).

Wildlife

Agricultural and ruderal vegetation found on the Project site provides habitat for both common and a few special-status wildlife populations. For example, some commonly observed wildlife species in the region include: California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus),* American kestrel (*Falco sparverius*), white-tailed kite (*Elanus leucurus*), American killdeer (*Charadrius vociferus*), gopher snake (*Pituophis melanoleucus*), garter snake (*Thamnophis species*), and western fence lizard (*Sceloporus occidentalis*), as well as many native insect species. There are also several bat species in the region. Bats often feed on insects as they fly over agricultural and natural areas.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting.

Plant Communities

Agricultural and natural plant communities provide habitat for a variety of biological resources in the region. Sensitive habitats include those that are of special concern to resource agencies or those that are protected under a Habitat Conservation Plan, Natural Community Conservation Plan, the California Environmental Quality Act (CEQA), the Fish and Game Code, or the Clean Water Act (CWA). Additionally, sensitive habitats are usually protected under specific policies from local agencies. Figure 3.4-1 illustrates the plant communities (land cover types) in the vicinity of the Project site.

Table 3.4-1 summarizes the plant communities (land cover types) by acreage.

TABLE 3.4-1: LAND COVER TYPES

LAND COVER TYPE	*ACREAGE*
Deciduous Orchard	77.01
Evergreen Orchard	8.83
Irrigated Row and Field Crops	0.62
Riverine	1.07
Urban	56.16
Vineyard	11.43
TOTAL	*155.11*

SOURCE: FRESNO COUNTY GIS; NRCS SOIL SURVEY MAP DATE: SEPTEMBER 12, 2022.

The majority of the Project site is labeled as Deciduous Orchard (77.01 acres) on the land cover types maps. The remainder of the site includes Evergreen Orchard (8.83 acres), Irrigated Row and Field Crops (0.62 acres), Riverine (1.07 acres), Urban (56.16 acres), and Vineyard (11.43 acres).

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards).

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

Drainage and Hydrogeomorphic Features

The Development Area has historically drained to the southwest. The site is fairly flat with little change in elevation. Historically, there was a small lake that was located north of the Development Area and has since been filled. A topographic map from 1919 shows the general vicinity of the Development Area.

A query of the National Wetland Inventory Map does not show any stream, creeks, or wetland on the Study Area. The National Wetland Inventory Map code is "PUBHx," which correlates to "palustrine, unconsolidated bottom, permanently flooded, excavated. Based on a review of historical records, readily available wetland mapping databases, and a site review, the field investigation completed as part of the *Biological Habitat Assessment* (Argonaut Ecological Consulting, Inc., 2018) confirmed the accuracy of the U.S. Fish and Wildlife Service's Wetland Inventory Map. No wetlands, waters, or any aquatic habitat is present within the Development Area. There is a man-made conveyance channel (trapezoidal with no vegetation) located along the northern boundary, but outside the project limits.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service's (USFWS) records of listed endangered and threatened species from the Information for Planning and Consultation (IPaC) database. The background search was regional in scope and focused on the documented occurrences within the nine-quadrangle region (approximately 10 miles) of the Project site. The background search included the following USGS quadrangles: Lanes Bridge, Friant, Academy, Round Mountain, Clovis, Fresno North, Fresno South, Malaga, and Sanger. The Table 3.4-2 provides a list of special-status plants and Table 3.4-3 provides a list of special-status animals. Figure 3.4-2 presents the documented occurrences within the nine-quadrangle region for the Project site.

TABLE 3.4-2: SPECIAL-STATUS PLANT SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED./CA/ CNPS)*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
bristly sedge *Carex comosa*	--/--/2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1010 m. May-September.	Not Present
California jewelflower *Caulanthus californicus*	E/E/1B.1	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. Sandy soils. 65-1860 m. February-May.	Not Present
California satintail *Imperata brevifolia*	--/--/2B.1	Coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m. September-May.	Not Present
dwarf downingia *Downingia pusilla*	--/--/2B.2	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 1-490 m. March-May.	Not Present
forked hare-leaf *Lagophylla dichotoma*	--/--/1B.1	Cismontane woodland, valley and foothill grassland. Sometimes clay. 190-335 m. April-June.	Not Present
Greene's tuctoria *Tuctoria greenei*	E/R/1B.1	Vernal pool. Vernal pools in open grasslands. 25-1325 m. May-July.	Not Present
hairy Orcutt grass *Orcuttia pilosa*	E/E/1B.1	Vernal pools. 25-125 m. May-September.	Not Present
Hartweg's golden sunburst *Pseudobahia bahiifolia*	E/E/1B.1	Valley and foothill grassland, cismontane woodland. Clay soils, often acidic. Predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools. 60-170 m. March-April.	Not Present
Hoover's calycadenia *Calycadenia hooveri*	--/--/1B.3	Cismontane woodland, valley and foothill grassland. On exposed, rocky, barren soil. 60-260 m. July-September.	Not Present
Madera leptosiphon *Leptosiphon serrulatus*	--/--/1B.2	Cismontane woodland, lower montane coniferous forest. Dry slopes; often on decomposed granite in woodland. 80-1645 m. April-May.	Not Present
pincushion navarretia *Navarretia myersii ssp. myersii*	--/--/1B.1	Vernal pools. Clay soils within non-native grassland. 45-100 m. Grassy valley floors and rolling foothills in heavy clay soil. 115-795 m. April-May.	Not Present
San Joaquin adobe sunburst *Pseudobahia peirsonii*	T/E/1B.1	Valley and foothill grassland, cismontane woodland. March-April.	Not Present
San Joaquin Valley Orcutt grass *Orcuttia inaequalis*	T/E/1B.1	Vernal pool. 10-755 m. April-September.	Not Present
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. May-October (November).	Not Present
spiny-sepaled button-celery *Eryngium spinosepalum*	--/--/1B.2	Vernal pools, valley and foothill grassland. Some sites on clay soil of granitic origin; vernal pools, within grassland. 15-1270 m. April-June.	Not Present
succulent owl's-clover *Castilleja campestris var. succulenta*	T/E/1B.2	Vernal pools. Moist places, often in acidic soils. 20-705 m. (March) April-May.	Not Present

NOTES: CNPS = CALIFORNIA NATIVE PLANT SOCIETY

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL CALIFORNIA ENDANGERED SPECIES ACT.

R = RARE UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

CALIFORNIA NATIVE PLANT SOCIETY

1B = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA AND ELSEWHERE.

2 = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE.

3 = A REVIEW LIST – PLANTS ABOUT WHICH MORE INFORMATION IS NEEDED.

4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST

.1 = SERIOUSLY ENDANGERED IN CALIFORNIA (OVER 80% OF OCCURRENCES THREATENED-HIGH DEGREE AND IMMEDIACY OF THREAT).

.2 = FAIRLY ENDANGERED IN CALIFORNIA (20-80% OCCURRENCES THREATENED).

.3 = NOT VERY ENDANGERED IN CALIFORNIA (<20% OF OCCURRENCES THREATENED).

TABLE 3.4-3: SPECIAL-STATUS WILDLIFE AND FISH SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED/CA)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*
INVERTEBRATES			
California linderiella *Linderiella occidentalis*	--/--	Ranges from near Redding in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin Rivers	Natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities
midvalley fairy shrimp *Branchinecta mesovallensis*	--/--	Extending from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County and along the central Coast Range from northern Solano County to Pinnacles National Monument in San Benito County.	Vernal pools with tea-colored water, most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands.
Vernal pool fairy shrimp *Branchinecta lynchi*	T/--	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; they are also found in sandstone rock outcrop pools.
Antioch efferian robberfly *Efferia antiochi*	--/--	Known only from Antioch, Fresno, and Scout Island in the San Joaquin River	No specific habitat information is available.
Crotch bumble bee *Bombus crotchii*	--/--	Central California south to Baja California del Norte, Mexico, and includes coastal areas east to the edges of the deserts and the Central Valley	Open grassland and scrub
Hurd's metapogon robberfly *Metapogon hurdi*	--/--	Known only from the sand dunes at Antioch and San Joaquin Valley.	No specific habitat information is available.
Molestan blister beetle *Lytta molesta*	--/--	Distribution of this species is poorly known	Annual grasslands, foothill woodlands or saltbush scrub.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/--	Stream side habitats below 3,000 feet throughout the Central Valley	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.
western ridged mussel *Gonidea angulata*	--/--	Known to occur in California, Oregon, Washington, Idaho, Nevada, and British Columbia	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.
AMPHIBIANS			
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	T/T(WL)	Central California	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.
western spadefoot *Spea hammondii*	--/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.
BIRDS			
black-crowned night heron *Nycticorax nycticorax*	--/--	Throughout California	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.

SPECIES	*STATUS (FED/CA)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*
burrowing owl *Athene cunicularia*	BCC/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows
California horned lark *Eremophila alpestris actia*	--/WL	Central Valley and coastal valleys and foothills.	Forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat.
double-crested cormorant *Nannopterum auritum*	--/WL	Nonbreeding California habitat located along coastal California and the Central Valley. Migrates throughout California.	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.
great egret *Ardea alba*	--/--	Throughout California	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.
least Bell's vireo *Vireo bellii pusillus*	E/E	Central Valley of California and other low-elevation river valleys.	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak.
prairie falcon *Falco mexicanus*	--/WL	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms.	Found below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.
snowy egret *Egretta thula*	--/--	Found mostly throughout North, Central, and South America. Breeds in coastal and inland wetlands. Their range has been limited over time due to habitat destruction and hunting. A migratory species that relocates from the United States and Canada to Mexico, Central America, South America, and the West Indies.	Prefer shallow water inlets for feeding such as salt-marsh pools, tidal channels, and bays. Mostly along coastal areas and islands. During winter time they migrate and roost in the mangroves of the Caribbean.
Swainson's hawk *Buteo swainsoni*	--/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields
tricolored blackbird *Agelaius tricolor*	--/T(SSC)	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	T/E	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak riparian habitats where scrub jays are abundant
FISH			
hardhead *Mylopharodon conocephalus*	--/SSC	Tributary streams in the San Joaquin drainage; large tributary streams in the Sacramento River and the main stem	Resides in low to mid-elevation streams and prefer clear, deep pools and runs with slow velocities. They also occur in reservoirs.

SPECIES	*STATUS (FED/CA)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*
MAMMALS			
American badger *Taxidea taxus*	--/SSC	In California, badgers occur throughout the State except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties	Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground
Fresno kangaroo rat *Dipodomys nitratoides exilis*	E/E	Western Fresno County.	Alkali sink-open grassland habitats. Bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.
hoary bat *Lasiurus cinereus*	--/--	Occur in all 50 states. Rare in the eastern United States and northern Rockies. Found mainly in the Pacific Northwest and California, Arizona, and New Mexico.	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
pallid bat *Antrozous pallidus*	--/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts
San Joaquin kit fox *Vulpes macrotis mutica*	E/T	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County	Saltbush scrub, grassland, oak, savanna, and freshwater scrub
San Joaquin pocket mouse *Perognathus inornatus*	--/--	Occurs throughout the San Joaquin Valley and in the Salinas Valley	Favors grasslands and scrub habitats with fine textured soils
spotted bat *Euderma maculatum*	--/SSC	Distributed across large areas of western North America from southern British Columbia to the central Mexican state of Queretaro.	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.
western mastiff bat *Eumops perotis californicus*	--/SSC	Ranges from central Mexico across the southwestern United States (parts of California, southern Nevada, southwestern Arizona, southern New Mexico and western Texas). Significant populations of E. perotis occur in many of the Sierra Nevada river drainages, particularly in the central and southern Sierra, i.e., the Stanislaus, Tuolumne, Merced (North and South Forks), San Joaquin, Kaweah, Tule, and Kern rivers.	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.
REPTILES			
California glossy snake *Arizona elegans occidentalis*	--/SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils
coast horned lizard *Phrynosoma blainvillii*	--/SSC	Historically found in California along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California.	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.

SPECIES	*STATUS (FED/CA)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*
Northern California legless lizard *Anniella pulchra*	--/SSC	California legless lizards are found in California and Mexico. They are found from western central California (San Joaquin and the coastal regions), through northwestern Baja California, and as far south as Colonia Guerrero, Mexico.	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PE = PROPOSED FOR ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PT = PROPOSED FOR THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.
D = DELISTED FROM FEDERAL LISTING STATUS.
BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.
SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the State and nation, including the California Department of Fish and Wildlife (CDFW), USFWS, U.S. Army Corps of Engineers (USACE), and the Central Valley Regional Water Quality Control Board (CVRWQCB). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the Federal, State and local regulations that are applicable to the proposed Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed, it is fully protected from a "take" unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles, as well as their nests and eggs from willful damage or injury.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or

saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the CVRWQCB. To obtain the water quality certification, the CVRWQCB must indicate that the proposed fill would be consistent with the standards set forth by the State.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code §2050-2097 – California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 – California Native Plant Protection Act

In 1977, the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the State. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate

native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 – Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called "raptors," are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a "Streambed Alteration Agreement" from CDFW prior to any alteration of a lakebed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code §21000 - California Environmental Quality Act

CEQA identifies that a species that is not listed on the Federal or State endangered species list may be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines § 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e., candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and Federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate State water quality and protect beneficial uses.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and Federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and freshwater replenishment. Major issues and the general conditions of existing beneficial uses in the SJR are as follows:

- Water Supply: The SJR is not currently a source of municipal water supply for the City of Clovis and is not identified as a source for the proposed Project, although some farms in the region use the river as a source of water for irrigation. The City currently uses groundwater only and surface water from the SSJID South County Surface Water Supply Project (SCSWSP), which does not rely on the SJR.
- Agricultural Supply: Extensive use is made of SJR and Delta waters for agricultural purposes. Annual water diversions from the Delta by the State Water Project (SWP) and the Central Valley Project (CVP) for agriculture are estimated to reach 4.3 million acre-feet (MAF) per year by 2030. In addition, about 2,000 privately owned agricultural water supply diversions are scattered throughout the Delta, generally consisting of riverside pumping stations.

- Recreation: Water-dependent recreation uses of the SJR and the Delta include swimming, wading, waterskiing, sport fishing, and a variety of other activities that involve contact with the water. Noncontact (water-enhanced) recreation uses include picnicking, camping, pleasure boating, hunting, bird watching, education, and aesthetic enjoyment.
- Groundwater Recharge: Water from the SJR and the Delta recharges the San Joaquin Valley groundwater basin. Recharge serves to maintain salt balance in the soil column, prevent saltwater intrusion into freshwater aquifers, and provide for water supplies. Groundwater is replenished through deep percolation of streamflow, precipitation, and applied irrigation water. Groundwater quality is generally adequate throughout the San Joaquin Valley and the Delta, although at shallow depths within the Delta, the water is often saline and contains high levels of total dissolved solids (TDS) and dissolved minerals. Enforceable TDS standards do not exist for drinking water. The need for treatment generally depends on consumer acceptance.
- Fish and Wildlife: The SJR and the waterways of the Delta provide important habitat for a diverse variety of aquatic life and terrestrial wildlife. This includes temporary habitat and migration routes for anadromous and other migratory species, as well as permanent habitat for resident species. Fish dependent on the Delta as a migration corridor, nursery, or permanent residence include Chinook salmon, steelhead, delta smelt, Sacramento splittail, striped bass, American shad, sturgeon, catfish, largemouth bass, and numerous other estuary and freshwater species. The amount and quality of water flowing through the Delta greatly influences the overall productivity of the area on an annual basis. A large assemblage of wildlife uses the Delta either seasonally or year-round, including waterfowl; migratory and resident songbirds; mice, rabbits, and other small mammals; water dependent mammals, such as beaver and muskrat; and predators such as skunk, raccoon, northern harrier, and coyote.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes the following policy that is relevant to biological resources:

POLICIES: OPEN SPACE AND CONSERVATION ELEMENT

- Policy 2.6 Biological resources. Support the protection of biological resources through the conservation of high-quality habitat area.

City of Clovis Municipal Code

Chapter 9.30, Tree Protection Standards, of the Clovis Municipal Code outlines protected trees, heritage trees, and tree removal permit/application requirements.

Section 9.30.040 of the Code states that, except as otherwise provided in Section 9.30.050 (Exemptions), the following trees shall not be removed from private property without first obtaining a tree removal permit:

A. Heritage trees. Heritage trees in all zoning districts;
B. Condition of approval. Any tree required to be planted or retained as a condition of approval of a development application or a building permit in all zoning districts;
C. Multi-trunk trees. For multi-trunk trees, any tree which has at least one trunk twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade, except for developed single-family residential properties.
D. Twelve inches (12") or greater in diameter. Any tree which measures twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade in all zoning districts, except for developed single-family residential properties.
E. Parkway trees. Parkway trees and any tree located on public property.
F. Trees required by site plan review. Trees required or memorialized under site plan review. (See Chapter 56 of this title) (§ 2, Ord. 14-13, eff. October 8, 2014)

Chapter 9.120, Definitions, of the Municipal Code includes the following definition for heritage trees:

> Heritage tree. Any tree so designated by the Protected Tree Advisory Committee based on the finding that the tree has character, significant age and girth, interest or value as part of the development of and/or exemplification of the agricultural, cultural, economic, educational, social, indigenous or historical heritage of the City and identified on the historic resources inventory.

Section 9.30.050, Exemptions, states that the following tree types and conditions are exempt from Chapter 9.30 and may be removed without approval of a tree removal permit:

A. Emergencies. Trees that pose an immediate threat to persons or property during an emergency or are determined to constitute an emergency, upon order of the Director, the Public Utilities Director, or any member of the Police or Fire Departments.
B. Public nuisance. Any tree in a condition to constitute a public nuisance, as defined in Chapter 1 of Title 10, when the declaration of a public nuisance has been made by the Building Official, the Director, the Fire Chief, or the Public Utilities Director.
C. Public utilities. Trees that undermine or impact the safe operation of public utilities.
D. Fruit trees. Fruit tree(s) in any zoning district.
E. Eucalyptus trees. All trees of the genus Myrtaceae.
F. Developed single-family residential. Any tree located on developed single-family residential property, except as specified in Section 9.30.040 (Protected trees). (§ 2, Ord. 14-13, eff. October 8, 2014)

Further, Section 9.30.090, Replacement trees, outlines requirements for replacement trees.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on biological resources if it will:

- 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;
- 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;
- 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; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.4-1: The proposed Project has the potential to have a direct or indirect effect on special-status invertebrate species. (Less than Significant)

According to the CNDDB, there are nine special-status invertebrate species that are documented within the nine-quadrangle region for the Project site, including: California linderiella (*Linderiella occidentalis*), midvalley fairy shrimp (*Branchinecta mesovallensis*), Vernal pool fairy shrimp (*Branchinecta lynchi*), Antioch efferian robberfly (*Efferia antiochi*), Crotch bumble bee (*Bombus crotchii*), Hurd's metapogon robberfly (*Metapogon hurdi*), Molestan blister beetle (*Lytta molesta*), Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and western ridged mussel (*Gonidea angulata*).

Field surveys/habitat evaluations for the entire Project site were performed on May 11, 2021 (De Novo Planning Group) and October 23, 2017 (Argonaut Ecological Consulting, Inc.).

California linderiella requires natural and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. California linderiella is not anticipated to be directly affected by any individual

phase or component of the proposed Project because there are no seasonally ponded habitat types in the Project site.

Midvalley fairy shrimp requires vernal pools with tea-colored water, most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. Midvalley fairy shrimp is not anticipated to be directly affected by any individual phase or component of the proposed Project because there are no vernal pool habitat types in the Project site.

Vernal pool fairy shrimp is a Federal threatened invertebrate found in the Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. They are commonly found in vernal pools and in sandstone rock outcrop pools. Vernal pool fairy shrimp is not anticipated to be directly affected by any individual phase or component of the proposed Project because there in not appropriate vernal pool habitat on the Project site.

Valley elderberry longhorn beetle is a Federal threatened insect, proposed for delisting. Elderberry (*Sambucus* sp.), which is a primary host species for valley elderberry longhorn beetle, is not present within the Project site. Valley elderberry longhorn beetle is not anticipated to be directly affected by any individual phase or component of the proposed Project because there are no blue elderberry shrubs in the Project site.

Western ridged mussel occurs primarily within creeks and rivers, and less often lakes. Originally in most of state, this species is now extirpated from Central and Southern California. Aquatic habitat for this species is not found on-site.

Essential habitat for Antioch efferian robberfly, Molestan blister beetle, and Hurd's metapogon robberfly is not present on the Project site.

No special-status invertebrates, or their habitat, were observed within the Project site during field surveys and none are expected to be affected by the proposed Project. Therefore, the proposed Project would have a **less than significant** impact on special-status invertebrate species.

Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species. (Less than Significant)

According to the CNDDB, there are four special-status reptile species that are documented within the nine-quadrangle region for the Project site, including: California glossy snake (*Arizona elegans occidentalis*), coast horned lizard (*Phrynosoma blainvillii*), and Northern California legless lizard (*Anniella pulchra*). Additionally, there are two special-status amphibian species that are documented within the nine-quadrangle region for the Project site, including: California tiger salamander - central California DPS (*Ambystoma californiense [A. tigrinum c.] pop. 1*) and western spadefoot (*Spea hammondii*).

California Tiger Salamander: California tiger salamander (*Ambystoma californiense*) is both federally and state listed as endangered. CTS is endemic to California and the historical presence of it likely includes grassland habitats that are found throughout the state. The primary cause for decline in

populations has been habitat loss and fragmentation due to urban and agricultural development, land conversion, and other human-caused factors. California tiger salamander occupy different habitats depending on the state of their life cycle and breeding cycle. CTS require seasonal ponds that retain water until at least May or June in order to successfully breed and the young to mature. Once the aquatic larvae have matured, they relocate to the dry upland habitat to aestivate (oversummer) during the hot dry summers, seeking shelter in underground burrows. Once the winter rains return and suitable ponding has occurred, the adults return to the seasonal ponds to breed. During years of low rainfall, the males may migrate into the seasonal ponds, but the females may remain in their upland habitat. There appears to be a strong association between grazed communities, burrowing mammals, and the presence of CTS (USDOI 2009). Adults will find burrows dug by California ground squirrels (*Otospermophilus beecheyi*) and pocket gophers (*Thomomys bottaeto*) to aestivate (Barry and Shaffer 1994, Trenham 2001).

Typically, CTS breed in seasonal wetlands, ponds (including some farm ponds) or in slow moving portions of creeks. The upland habitat they use is typically grassland or ruderal habitat that has friable soils and supports a burrowing rodent. CTS have been reported to travel up to 1.3 miles between breeding habitat and upland habitat.

The nearest California tiger salamander (CTS) record (occurrence record # 613) is located south of the Study Area, just southwest of the intersection of Nees Avenue and N. Fowler Avenue.

This record is from 1974 and the species was found in a vernal pool. Jennings considered this record extirpated (species no longer present), since the land has since been converted to dense residential.

A second CTS record was found in the CNDDB. This record (occurrence record # 888) is located to the northeast along Dry Creek (1.5 miles from the center of the Study Area, and 1.3 miles from the eastern edge of the Study Area). This record is from 2006 and CTS larva was found in a swale adjacent to the man-made Dry Creek channel just below the Big Dry Reservoir. The surrounding land has vernal pool and other seasonal wetlands.

The Project site does not support any aquatic habitat that could support CTS. The channel/ditch located immediately north of the Study Area remains dry except in response to groundwater pumping or some return flows from the orchard during the non-breeding season (personal conversation with the orchard manager, 2017). The ditch does not pond water, but instead has a flashy hydrologic regime (days). The channel/ditch is not suitable habitat for CTS because it lacks sufficient ponding during the breeding season.

The Project site also does not support ground burrowing mammals given that it is an active orchard with a rodent control program being implemented onsite. Additionally, there is no physical evidence of burrows that could be used for estivation by CTS. The existing residential areas in the vicinity have limited habitat quality for this species. Overall, it is highly unlikely that the orchard or residential areas would support a CTS population.

Western Pond Turtle: The western pond turtle is a California species of special concern. This species' favored habitats include streams, large rivers and canals with slow-moving water, aquatic

vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates, such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

A western pond turtle record is located to the southeast, south of Shepherd Avenue. The Project site does not support any aquatic habitat that could support this species. The channel/ditch located immediately north of the Study Area remains dry except in response to groundwater pumping or some return flows from the orchard during the non-breeding season (personal conversation with the orchard manager, 2017). The ditch does not pond water, but instead has a flashy hydrologic regime (days). The channel/ditch is not suitable habitat for CTS because it lacks sufficient ponding during the breeding season. Western pond turtle requires persistent ponded water, which does not occur within the Study Area.

Western Spadefoot: The western spadefoot is a California species of special concern. This species is found in the Sierra Nevada foothills, Central Valley, Coast Ranges, and coastal counties in southern California. Its favored habitats include shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.

The CNDDB search shows the species occurs within a 9-quad search; however, there are no records proximate to the Project site and field surveys revealed that the necessary aquatic habitat and upland habitat is not present.

Conclusion*:* The Project site does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. No special-status reptiles or amphibians, or their habitat, were observed within the Project site during the field surveys and none are expected to be affected by the proposed Project. Therefore, the proposed Project would have a **less than significant** impact on special-status reptile or amphibian species.

Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species. (Less than Significant with Mitigation)

According to the CNDDB, there are thirteen (13) special-status bird species that are documented within the nine-quadrangle region for the Project site, including: black-crowned night heron (*Nycticorax nycticorax*), burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), double-crested cormorant (*Nannopterum auritum*), great egret (*Ardea alba*), least Bell's vireo (*Vireo bellii pusillus*), snowy egret (*Egretta thula*), Swainson's hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), and Western yellow-billed cuckoo (*Coccyzus americanus Occidentalis*). The Project site may provide suitable foraging habitat for a variety of potentially occurring special-status birds, including some of those listed above. Potential nesting habitat is present in a variety of trees located within the Project site and in the vicinity. There is also the

potential for other special-status birds that do not nest in this region and represent migrants or winter visitants to forage on the Project site.

NESTING RAPTORS (BIRDS OF PREY)

All raptors (owls, hawks, eagles, falcons), including common species, and their nests, are protected from take pursuant to the Fish and Game Code of California Section 3503.5, and the federal MBTA, among other federal and state regulations. Powerlines on the Project site and trees located in the region represent potentially suitable nesting habitat for a variety of special-status raptors. The Project site is generally not suitable for nesting raptors other than ground nesters. In general, raptor nesting occurs from late February and early March through late July and early August, depending on various environmental conditions.

CNDDB Documented Raptor Species

Swainson's hawk (Buteo swainsoni) is state threatened and is a migrant species that spends much of the spring, summer, and early fall in California's Central Valley. Their preferred nesting habitat consists of valley oaks, cottonwoods, and other tall trees adjacent to both agricultural fields and grasslands. They have been observed more frequently in recent years within the Central Valley. Due to the recent expansion of their population, it is possible that agricultural, grassland, and rural residential areas may support foraging and possibly nesting hawks. However, the orchard is not considered quality habitat for foraging or nesting. This species generally prefers open fields for foraging, and tall trees for nesting. The Project site is within the range of documented Swainson's hawk, and given the high mobility of the species, it is possible that an individual could be present on the site at some future time even though none have been observed or recorded in the past.

Burrowing Owl (Athene cunicularia) is a species of concern in California. It is a small owl that typically lives in grassland habitats of the Central Valley region that also support California ground squirrels. The species will also sometimes overwinter or even nest within agricultural areas, using whatever is available (pipes, ground holes/burrows). The owl seeks shelter and breeds from February to July. Although the numbers of owls have declined in some parts of California over the past 20 years, their numbers have increased greatly in some agricultural areas. In Fresno County, the species mostly occurs on the valley floor.

The orchard is not considered quality habitat for foraging or nesting for this species. The Project site is within the range of this species and given the high mobility of the species, it is possible that an individual could be present on the site at some future time even though none have been observed or recorded in the past.

Other Raptor Species

Bald Eagle: Bald eagle is listed by CDFW as an Endangered species. The breeding range includes the Sierra Nevada, Cascade Range and portions of the Coast Ranges; winter range expands to include most of the state. This species forages primarily in large inland fish-bearing waters with adjacent large trees or snags and occasionally in uplands with abundant rabbits, other small mammals, or carrion. The Project site does not contain suitable habitat for this species.

Cooper's Hawk: Cooper's hawk is protected by the MBTA and the Fish and Game Code. They prefer open woodland habitat. Nest sites for this species are mainly found in riparian growths of deciduous trees, in canyon bottoms on river floodplains, and also in live oaks. The Project site does not contain suitable nesting habitat for this species.

Ferruginous Hawk: Ferruginous hawk is listed by CDFW as a Watch List species. They prefer open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon and juniper habitats. This species eats mostly lagomorphs, ground squirrels, and mice. The Project site does not contain suitable nesting habitat for this species.

Golden Eagle: Golden eagle is listed by CDFW as a Fully Protected species. The winter range for this species spans most of California; the breeding range excludes the Central Valley floor. This species nests in cliffs, rocky outcrops, and large trees. Golden eagles typically forage in a variety of open habitats, including grassland, shrubland, and cropland. The Project site does not contain suitable nesting habitat for this species.

Merlin: The Merlin is a CDFW species of special concern that has never been observed nesting in California. Though it is a transient throughout most of the state, wintering populations are known to occur in the Central Valley and along the coast. The Project site does not contain suitable nesting habitat for this species.

Northern Harrier: Northern harrier is listed by CDFW as a Watch List species. They prefer a variety of open grassland, wetland, and agricultural habitats. Open wetland habitats used for breeding include marshy meadows, wet and lightly grazed pastures, and freshwater and brackish marshes. Northern Harrier breeding habitat also includes dry upland habitats, including grasslands, croplands, drained marshlands, and shrub-steppe in cold deserts. This species is a ground nester. The Project site does not contain suitable nesting habitat for this species.

Prairie Falcon: Prairie falcon is listed by CDFW as a Watch List species. They are a summer resident of southern California in low riparian in the vicinity of water or in dry river bottoms. They are found below 2000 ft and nests are placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. The Project site does not contain suitable nesting habitat for this species.

White-Tailed Kite: White-tailed kite is a CDFW Fully Protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target. The Project site does not contain suitable nesting habitat for this species.

NESTING PASSERINE BIRDS (SONGBIRDS)

Bank Swallow: Bank swallow is listed by CDFW as a Threatened species. They typically prefer to nest along banks or bluffs along rivers or coastal areas. This species also prefers low gradient and

meandering rivers or bodies of water. The Project site does not contain suitable habitat for this species.

California Horned Lark: This species is listed by CDFW as a Watch List species. They prefer to forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat. The Project site does not contain suitable nesting habitat for this species.

Least Bell's Vireo: This species is listed by CDFW as a federal and CDFW Endangered species. They are found in the Central Valley of California and other low-elevation river valleys. They prefer dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak. The Project site does not contain suitable nesting habitat for this species.

Loggerhead Shrike: loggerhead shrike is listed by CDFW as a species of special concern. Loggerhead shrikes occur in dry, open habitats including grasslands, pastures with fence rows, agricultural fields, open woodlands (savannas), scrub, and riparian areas. They inhabit open areas with clear visibility for hunting, perches for scanning, and scattered small trees and large shrubs for nesting. Loggerhead shrikes typically avoid completely treeless and shrubless areas (Cade and Woods 1997), as well as urbanized and densely wooded areas (Grinnell and Miller 1944). Winter foraging habitat is similar to summer breeding and foraging habitat; however, shrikes also use idle pastures and hayfields during the winter (Bartgis 1992). The Project site does not contain suitable nesting habitat for this species.

Song Sparrow: Song sparrows are listed by CDFW as a species of special concern due to declining populations in the Great Central Valley of California. They prefer open grasslands with barren ground for foraging and tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies. The Project site does not contain suitable habitat for this species.

Purple martin: Purple martin are listed by CDFW as a species of special concern. They inhabit woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. They nest in old woodpecker cavities mostly, but also in human-made structures. Nests are often located in tall, isolated tree/snag. The Project site does not contain suitable habitat for this species.

Tricolored Blackbird: Tricolored blackbirds are listed by CDFW as a Threatened species. During the breeding season, tricolored blackbirds typically nest in dense colonies (some estimated as having 200,000+ nests), with males defending small territories and mating with one to four females. Studies have shown that nesting colonies are often located in seasonal wetlands with tules and cattails present. More recent studies indicate that nesting colonies are also regularly found in Himalayan blackberries (Rubus discolor) and grain fields. Other substrates where they have been observed nesting include giant European reed (Arundo donax), safflower (Carthamus tinctorius), tamarisk (Tamarix spp.), elderberry (Sambucus spp.), poison-oak (Toxicodendron diversilobum), and riparian scrublands and forests (e.g., Salix, Populus, and Fraxinus spp.).

Tricolored blackbird foraging habitats in all seasons include annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures

with continuous haying schedules, and recently tilled fields), cattle feedlots, and dairies. They also forage occasionally in Mixed Riparian Scrub habitats along marsh borders. Weed-free row crops, intensively managed vineyards, and orchards do not serve as regular foraging sites (Beedy and Hamilton 1997, 1999; DeHaven 2000). The Project site does not contain suitable nesting habitat for this species.

Western yellow-billed cuckoo: Western yellow-billed cuckoo are CDFW listed as Endangered. They are found in riparian forest nester, along the broad, lower flood-bottoms of larger river systems. They nest in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. The Project site does not contain suitable habitat for this species.

Yellow-headed blackbird. Yellow-headed blackbird are CDFW listed as a species of special concern. They nest in freshwater emergent wetlands with dense vegetation and deep water. They are often found along borders of lakes or ponds and only nest where large insects, such as *Odonata* are abundant. Nesting is timed with maximum emergence of aquatic insects. The Project site does not contain suitable habitat for this species.

SHORE/WATER BIRDS

Colonial nesting water birds, such as double-crested cormorant, great blue heron, and great egret, among others, are considered sensitive species. These species are not formally listed and protected pursuant to either the state or federal Endangered Species Acts. However, these species are of stated interest to CDFW and are protected by the MBTA. The colonial nesting water birds documented within the region are discussed individually below.

Black-crowned night heron: Black-crowned heron are protected by the MBTA. These colonial nesters usually nest in trees, occasionally in tule patches. Rookery sites are located adjacent to foraging areas and include lake margins, mud-bordered bays, and marshy spots. The Project site does not contain suitable habitat for this species.

Double-Crested Cormorant: Double-crested cormorant are protected by the MBTA. They are colonial nesters, which prefer to nest on coastal cliffs, offshore islands, and along lake margins in the interior of the state. This species nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins. The Project site does not contain suitable habitat for this species.

Great Egret: Great egret are protected by the MBTA. These colonial nesters prefer to nest in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes. The Project site does not contain suitable habitat for this species.

Great Blue Heron: Great blue heron are protected by the MBTA. These colonial nesters prefer to nest in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites are typically located in close proximity to foraging areas, which include marshes, lake margins, tide-flats, rivers and streams, and wet meadows. The Project site does not contain suitable habitat for this species.

Snowy Egret: Snowy egret are protected by the MBTA. These colonial nesters that prefer shallow water inlets for feeding, such as salt-marsh pools, tidal channels, and bays. They are found commonly along coastal areas and islands and during wintertime, they migrate and roost in the mangroves of the Caribbean. The Project site does not contain suitable habitat for this species.

OTHER SENSITIVE BIRDS (GRUIFORMES)

The term "Gruiformes" means "crane-like" and there are a considerable number of Gruiformes bird families with a widespread geographical diversity.

Greater Sandhill Crane: Greater sandhill crane is listed as a CDFW threatened species, and is a SSHCP Covered Species. Greater sandhill cranes winter and use open agricultural habitats, natural vegetation communities, and seasonally managed wetlands. After the onset of winter rains, sandhill cranes begin foraging for invertebrates by probing soils in grassland habitats and overturning cattle dung. They also hunt for mice in taller grassland vegetation. They appear to avoid grassland habitats when vegetation exceeds 10 inches. Invertebrates are also consumed in natural and managed seasonal wetlands. The Project site does not contain suitable habitat for this species.

California Black Rail: California black rail are listed by CDFW as a Threatened species. They inhabit freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. This species requires water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat. The Project site does not provide the appropriate aquatic habitat for this species.

Conclusion

Several bird species discussed above are protected under federal, state, or local regulations. The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1*: The Project applicant shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:*

- *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.*
- *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines, based on these same considerations, that a change in buffer size would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*

Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species. (Less than Significant with Mitigation)

According to the CNDDB, there are eight special-status mammal species that are documented within the nine-quadrangle region for the Project site, including: American badger (*Taxidea taxus*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), San Joaquin pocket mouse (*Perognathus inornatus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*).

American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse: The Project site is frequently disturbed from active agricultural activities. As a result, the Project site does not contain high quality habitat for the American badger or Fresno kangaroo rat. American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse have not been documented within nine miles of the Project site. It is unlikely that the Project site is used by American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse and these species have not been observed during recent or previous field surveys. Therefore, the proposed Project would have a **less than significant** impact on these species.

Special-status bats: The Project site provides potential habitat for four special-status bats, including: hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*). Pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*) are Species of Special Concern; hoary bat (*Lasiurus cinereus*) does not have a state or federal protection status.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a **less than significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-2*: Prior to grading of each Project development phase, the Project applicant shall conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats:*

- *If removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be conducted by a qualified biologist. The surveys shall be conducted from dusk until dark.*
- *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.*
- *If a non-maternal roost is located, eviction and exclusion techniques shall be conducted as recommended by the qualified biologist. Methods may include opening the roosting area to change the air flow and lighting, installing one-way doors, or other appropriate methods that allow the bats to exit and find a new roost. After eviction is believed to be completed, acoustic monitoring, and an evening emergence survey shall be performed by the qualified biologist to ensure eviction is complete. For tree removal, a two-step tree removal process involving removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.*

Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on candidate, sensitive, or special-status plant species. (Less than Significant)

According to the CNDDB, there are 16 special-status plant species that are documented within the nine-quadrangle region for the Project site, including: bristly sedge (*Carex comosa*), California jewelflower (*Caulanthus californicus*), California satintail (*Imperata brevifolia*), dwarf downingia (*Downingia pusilla*), forked hare-leaf (*Lagophylla dichotoma*), Greene's tuctoria (*Tuctoria greenei*),

hairy Orcutt grass (*Orcuttia Pilosa*), Hartweg's golden sunburst (*Pseudobahia bahiifolia*), Hoover's calycadenia (*Calycadenia hooveri*), Madera leptosiphon (*Leptosiphon serrulatus*), pincushion navarretia (*Navarretia myersii ssp. Myersii*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), Sanford's arrowhead (*Sagittaria sanfordii*), spiny-sepaled button-celery (*Eryngium spinosepalum*), and succulent owl's-clover (*Castilleja campestris var. succulenta*).

Of the 16 documented plant species, seven are federally listed species (California jewelflower, Greene's tuctoria, hairy Orcutt grass, and Hartweg's golden sunburst, all endangered, and San Joaquin adobe sunburst, San Joaquin Valley Orcutt grass, and succulent owl's-clover are all threatened) and seven are State listed species (California jewelflower, hairy Orcutt grass, Hartweg's golden sunburst, San Joaquin adobe sunburst, San Joaquin Valley Orcutt grass, and succulent owl's-clover all endangered, while Greene's tuctoria is rare). Additionally, 13 are CNPS 1B listed species and three are CNPS 2 listed species.

Field surveys/habitat evaluations for the entire Project site were performed on May 11, 2021 (De Novo Planning Group) and October 23, 2017 (Argonaut Ecological Consulting, Inc.). The field survey performed by De Novo Planning Group coincided with the blooming period for special-status plants known to occur within the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The conditions of the Project site are highly disturbed due to the active agricultural operations. The site perimeter has a higher potential for plant growth that is not associated with the agricultural operations. This area was inspected during the field survey and special status plants were not observed. Therefore, development of the individual phases, and the proposed Project as a whole, will have a **less than significant** impact on special-status plants.

Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters. (No Impact)

As noted previously, a query of the National Wetland Inventory Map does not show any stream, creeks, or wetland on the Study Area. The National Wetland Inventory Map code is "PUBHx," which correlates to "palustrine, unconsolidated bottom, permanently flooded, excavated. Based on a review of historical records, readily available wetland mapping databases, and a site review, the field investigation completed as part of the *Biological Habitat Assessment* (Argonaut Ecological Consulting, Inc., 2018) confirmed the accuracy of the U.S. Fish and Wildlife Service's Wetland Inventory Map. No wetlands, waters, or any aquatic habitat is present within the Development Area. There is a man-made conveyance channel (trapezoidal with no vegetation) located along the northern boundary, but outside the project limits.

The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. Absent any wetlands or jurisdictional waters, development of the proposed Project would have **no impact** relative to this topic.

Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community. (Less than Significant)

The CNDDB record search revealed documented occurrences of five sensitive habitats within the nine-quadrangle region for the Project site, including: Great Valley Mixed Riparian Forest, Northern Claypan Vernal Pool, and Sycamore Alluvial Woodland. None of these sensitive natural communities occur within the portion of the Project site. Additionally, there is no riparian habitat on the Project site. Development of the proposed Project would have a **less than significant** impact on riparian habitats or natural communities.

Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

The CNDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Project site. Hardhead (*Mylopharodon conocephalus*) is the only special-status fish species documented within the region. The closest major natural movement corridor for native fish that are documented in the region is the San Joaquin River (which is dammed upstream at Millerton Lake), located approximately 5.4 miles to the west of the Project site.

The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. Therefore, Development of the proposed Project would have a **less than significant** level impact to any direct disturbance to the movement corridor or habitat.

Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan. (No Impact)

The proposed Project is not subject to a Habitat Conservation Plan. Therefore, the proposed Project would have **no impact** relative to this topic.

Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

The Open Space and Conservation Element of the General Plan establishes the following policy related to biological resources as listed below:

Open Space and Conservation Element Policies

Policy 2.6 Biological resources. Support the protection of biological resources through the conservation of high-quality habitat area.

- ***Consistent**: This EIR includes an in-depth analysis of impacts for sensitive plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize and avoid to the extent practicable.*

Municipal Code

Chapter 9.30, Tree Protection Standards, of the Clovis Municipal Code outlines protected trees, heritage trees, and tree removal permit/application requirements.

> Section 9.30.040 of the Code states that, except as otherwise provided in Section 9.30.050 (Exemptions), the following trees shall not be removed from private property without first obtaining a tree removal permit:
>
> A. Heritage trees. Heritage trees in all zoning districts;
> B. Condition of approval. Any tree required to be planted or retained as a condition of approval of a development application or a building permit in all zoning districts;
> C. Multi-trunk trees. For multi-trunk trees, any tree which has at least one trunk twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade, except for developed single-family residential properties.
> D. Twelve inches (12") or greater in diameter. Any tree which measures twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade in all zoning districts, except for developed single-family residential properties.
> E. Parkway trees. Parkway trees and any tree located on public property.
> F. Trees required by site plan review. Trees required or memorialized under site plan review. (See Chapter 56 of this title) (§ 2, Ord. 14-13, eff. October 8, 2014)

Chapter 9.120, Definitions, of the Municipal Code includes the following definition for heritage trees:

> Heritage tree. Any tree so designated by the Protected Tree Advisory Committee based on the finding that the tree has character, significant age and girth, interest or value as part of the development of and/or exemplification of the agricultural, cultural, economic, educational, social, indigenous or historical heritage of the City and identified on the historic resources inventory.

Section 9.30.050, Exemptions, states that the following tree types and conditions are exempt from Chapter 9.30 and may be removed without approval of a tree removal permit:

A. Emergencies. Trees that pose an immediate threat to persons or property during an emergency or are determined to constitute an emergency, upon order of the Director, the Public Utilities Director, or any member of the Police or Fire Departments.
B. Public nuisance. Any tree in a condition to constitute a public nuisance, as defined in Chapter 1 of Title 10, when the declaration of a public nuisance has been made by the Building Official, the Director, the Fire Chief, or the Public Utilities Director.
C. Public utilities. Trees that undermine or impact the safe operation of public utilities.
D. Fruit trees. Fruit tree(s) in any zoning district.

E. Eucalyptus trees. All trees of the genus Myrtaceae.
F. Developed single-family residential. Any tree located on developed single-family residential property, except as specified in Section 9.30.040 (Protected trees). (§ 2, Ord. 14-13, eff. October 8, 2014)

Further, Section 9.30.090, Replacement trees, outlines requirements for replacement trees.

The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements. Therefore, the proposed Project would have a **less than significant** impact relative to this topic.

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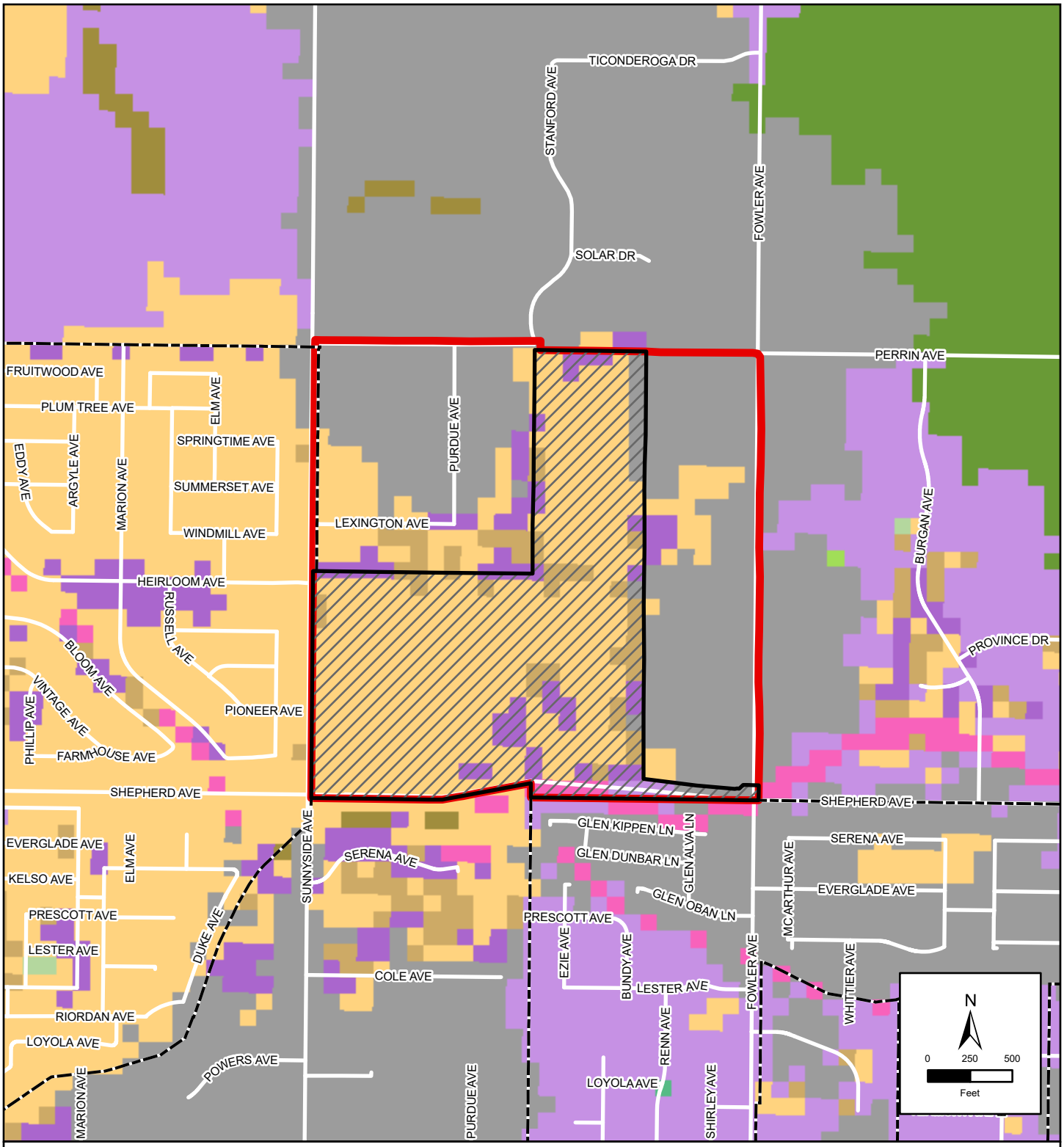

LEGEND

- Project Boundary
- Developement Area
- Clovis City Limits

Land Cover Types

- Annual Grassland
- Deciduous Orchard
- Dryland Grain Crops
- Evergreen Orchard
- Irrigated Grain Crops
- Irrigated Hayfield
- Irrigated Row and Field Crops
- Lacustrine
- Riverine
- Urban
- Vineyard

SHEPHERD NORTH PROJECT

Figure 3.4-1 Land Cover Types

Sources: Fresno County GIS; NRCS Soil Survey. Map date: May 8, 2023.

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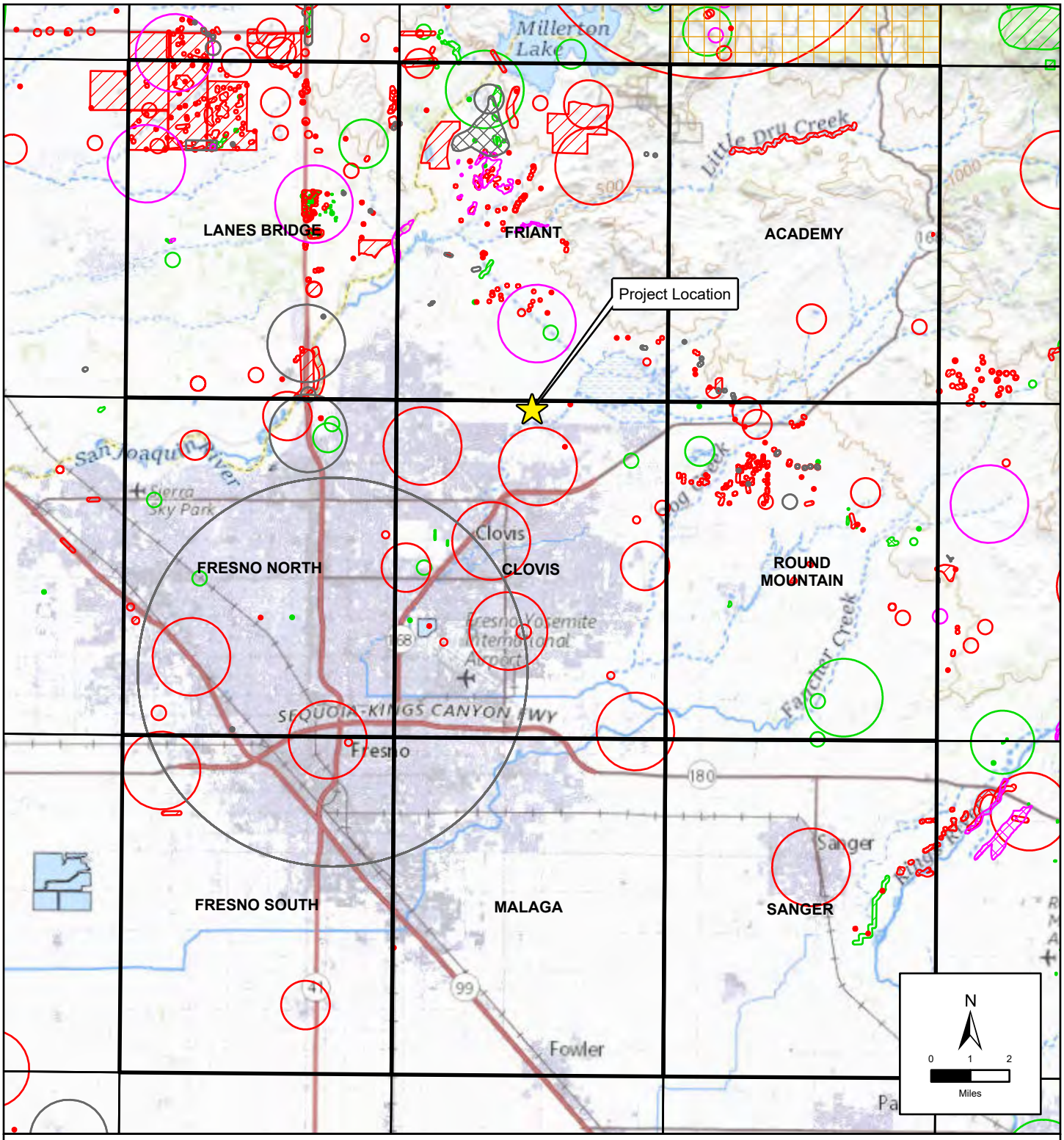

LEGEND

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

SHEPHERD NORTH PROJECT

Figure 3.4-2. California Natural Diversity Database
9-quad Search

Sources: Fresno County GIS. Map date: May 8, 2023.

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This section provides a discussion of the prehistoric period background, ethnographic background, and historic period background, known cultural and tribal resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the *Cultural Resource Assessment for the Cultural Resource Overview for the North Shepherd Project, City of Clovis, California* (Peak & Associates, Inc., January 12, 2023).

The Notice of Preparation (NOP) for the proposed Project was sent to the Native American Heritage Commission (NAHC) for review and comment on July 6, 2022. The NAHC provided comments on the proposed Project and a list of Native American contacts for consultation by the City of Clovis. There were no comments received during the public review period for the NOP related to cultural resources.

KEY TERMS

The following key terms are used throughout this section to describe cultural and tribal resources and the framework that regulates them:

Archaeology. The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.

Complex. A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.

Ethnography. The study of contemporary human cultures.

Midden. A deposit marking a former habitation site and containing such materials as discarded artifacts, bone and shell fragments, food refuse, charcoal, ash, rock, human remains, structural remnants, and other cultural leavings.

3.5.1 ENVIRONMENTAL SETTING

CULTURAL AND HISTORICAL SETTING

Prehistory

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data, but the emphasis has been in the northern portion of the valley. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-SAC107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary

practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

In the southern San Joaquin Valley, with the exception of Hewes's excavation at CA-FRE-48 (the Tranquility Site), the foci of early investigations have been the old shorelines of the interior lakes; Tulare, Kern, and Buena Vista. In 1899, Dr. P. M. Jones directed fieldwork in the Buena Vista-Tulare Lake area of Kern County. Jones investigated 150 mounds and conducted trenching of several sites including CA-KER-53. In 1909, N. C. Nelson investigated prehistoric Site CA-KER-49, which is located to the west of Buena Vista Lake. Later, four surveys and excavations were conducted in the same locale under the auspices of the University of California. A compilation of these investigation results was published in 1926 by Gifford and Schenck.

As a result of this early work, an elaborate culture complex was defined for the late prehistoric period. This complex can be ascribed probably to the Yokuts and their direct ancestors. The material culture of this late temporal period complex included steatite vessels and beads, finelymade projectile points, pottery, shaped stone mortars, Tivela disc beads, use of asphaltum, and the presence of metates and manos. Flexed burials were the predominant interment mode. Earlier complexes underlying the late cultural expressions were represented by chipped stone crescents, large projectile points, atlatl spurs, and weights. Mortuary practices, generally thought to be related, include extended rather than flexed burial position, a situation analogous to that of the northern valley (Gifford and Schenck 1926; Lillard, Heizer, and Fenenga 1939; Moratto 1972). 20 Presence of "Early Man," although not found in direct association with extinct animals, is demonstrated by the frequency of chipped stone crescents and fluted points similar to those of the Clovis-Folsom Complex in the American Southwest. Although fluted points have been found near the shores of Tulare Lake, an area that has also produced surface finds of extinct mammal bone of Pleistocene age, the association is not substantiated by controlled excavations and remains speculative (Riddell and Olsen 1969). Most of the point collection had been acquired by D. Witt over a period of 30 years.

Under the direction of Wedel (1941), the Civil Works Administration, in conjunction with the Smithsonian Institution, initiated the first major excavations using stratigraphic controls. Investigations of CA-KER-39 and CA-KER-60 as well as several smaller sites near Buena Vista Lake produced evidence of two distinct cultural entities or occupation periods. Wedel lacked methods for dating these two entities by cross-comparison of the assemblages, he tentatively stated that the early occupation at Buena Vista Lake appeared to be temporally older and less developed than the Early Horizon (Windmiller Pattern) of the Delta region. He compared this early component to the Oak Grove or Milling Stone culture of the Santa Barbara area (Rogers 1939). He divided the later cultural entity into two distinct phases, both clearly distinguished from the earlier cultural phase by artifact types. Wedel (1941:144-145) estimated that neither of these cultural periods exceeded 1500 B.P. (years Before the Present). Later, other investigators proposed far earlier ages

for these early occupations, with dates ranging from 2000 to 7000 B.P. (Baumhoff and Olmstead 1963, 1964; Heizer 1964; Meighan 1959).

Later investigations in 1963 and 1964 at CA-KER-116 near Buena Vista Lake produced materials similar to Wedel's early occupation. These materials occurred in the lower levels of the "upper deposit," while an even deeper cultural deposit yielded materials similar to those of the San Dieguito Complex. Artifacts included a chipped stone crescent, crude point fragments, and an atlatl spur. Radiocarbon age determinations on shell from the lowest cultural levels returned a date of circa 8200 B.P. (Fredrickson and Grossman 1966, 1977; Fredrickson 1967).

Despite the previously mentioned investigations, the prehistory of the southern San Joaquin remains as yet poorly understood, without a tightly defined chronological sequence of cultural development.

Ethnography

Ethnographic literature is often uncertain in definition of cultural boundaries for Indian groups. Early displacement by white intrusion resulted in population shifts to avoid conflict with the Spanish, and later with the miners and settlers. The ravages of disease and warfare decimated the native people, further weakening cultural identity. Informants were often uncertain of original territories of the various tribal groupings.

The Foothill Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Foothill Yokuts were a group of about 15 named tribes who occupied the western Sierra Nevada foothills from the Fresno River to the Kern River. A further subdivision separated the groups into northern, central and southern groups. The area controlled by individual groups varied over time. There is no information to indicate that there was a village in the project vicinity, but this does not preclude the possibility. Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs which formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925). The housepit depressions ranged in diameter from between 3 to 18 meters.

Latta (1949:99) reported that a village of 200 to 300 Yokuts might have four or five large houses that were used for ten or twelve years or until a family member died, at which time the Indians burned the house in which the death had occurred. If a sick or aged person died outside the dwelling, the family did not burn the house. When a Northern Yokuts died, the body was cremated or buried in a flexed position. Southern tribes normally buried their dead, although they did cremate shamans, persons who died away from their village and, among the Tachi, persons of great importance.

The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explorers. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts, but came from Old World diseases newly introduced to the native people.

Historical Background

EARLY EXPLORATIONS

The early recorded inhabitants of the region were members of the Yokuts tribe. Although the Spanish missions were established closer to the Pacific coast between 1769 and 1817, the general Project area was first visited in the early 1800s by Spanish explorers, who visited the San Joaquin Valley with three goals: to search for runaway neophytes from the missions in the coastal regions, to punish the Indian raiders, and to select sites for new missions. In 1806, a group led by Gabriel Moraga and Father Pedro Muñoz, left Mission San Juan Bautista heading north to about the Mokelumne River. They then turned south, and travelled along the edge of the mountains crossing the San Joaquin River and passing through Tejon Pass, arriving at Mission San Fernando. In 1815, José Dolores Pico marched an expedition group from Monterey into the region. Following the San Joaquin River, he passed through the area in search of runaways, traveling as far south as the Kern River. The expedition returned to the starting point in Monterey with nine prisoners and a number of horses.

After control of California passed from Spain to Mexico in 1822, Mexican explorations into the interior continued, with José Dolores Pico conducting a major expedition along the San Joaquin River in 1825-1826. This expedition was considered successful in that some neophytes were captured, hostile Indians killed, some of the tribal groups intimidated, and some stolen horses recovered. In 1828, Sebastián Rodríguez led a similar expedition into the same region. His expedition captured a number of neophytes as well as some of the stolen horses, an item that had become an important dietary staple for the Indian tribes in the San Joaquin Valley region (Beck and Haase 1974).

The expeditions did not leave physical evidence, but there were definitely effects to the Native American populations. Causing even more of an effect on the native population were the diseases brought in to the Native populations of the Central Valley in the early 1830s.

RANCHOS

In Fresno County, there was only one early land grant, a rancho along the current southern border of the county: Laguna de Tache. The era of the Spanish and Mexican land grants did not directly affect the Project area.

CLOVIS

The extension of the railroad system throughout the San Joaquin Valley allowed the increased expansion of a market for the agricultural production of the region. A branch line of the Southern Pacific Railroad (first known as the Pollasky Railroad or the San Joaquin Railroad) was built through this region circa 1891. Marcus Pollasky served as the promoter, and monies were raised locally for the construction costs. Clovis Cole, the owner of the large wheat ranch, donated land for the route, and a station was established here on the line and named Clovis (Gudde 1969; City of Clovis 1962).

After the completion of the railroad, the construction of the flume from Shaver Lake to the east was soon completed by the Fresno Flume and Irrigation Company. The 45-mile-long flume could deliver 200,000 board feet of lumber through the vee-shaped watercourse in a 24-hour period. At the end of the flume, there was a finishing and distributing plant. Other, better grade lumber was delivered to Clovis down Tollhouse Grade, hauled by ox and horse teams. In the early years, 140 men were employed by the lumber company, with an annual payroll of $450,000. The Clovis lumber plant occupied a 40 acre site. The factory, warehouse, (lumber) planing mill and engine house all burned to the ground in 1898, but were soon rebuilt. As many as 400 men were employed by the company. The mill was located on the south side of Fifth Street (City of Clovis 1962; Clovis Centennial Book Committee 2011).

The mill in Clovis produced “ordinary lines of lumber,” shakes, trays, sweat boxes, raisin boxes, orange boxes, cedar posts, ties, poles, and also pine and oak cordwood (Fresno Republican 1897: 96). The ever increasing agricultural use of the San Joaquin Valley, due to improvements and expansion of irrigation systems, led to a large market for the fruit packing boxes, allowing shipment of the produce to a wider marketplace.

Clovis was laid out by a licensed surveyor, working for the co-owners of the land: Clovis Cole, Clarence Pallos and George Owen. Early homes were utilitarian, and the streets were ungraded (City of Clovis 1962).

The town’s population expanded rapidly from about 500 residents in 1905 to about 1,000 in 1910. Nearby, the population was increasing within the local rural agricultural colonies, with large acreages broken up into 20 acre tracts advertised for sale to Midwesterners. By 1919, local population had grown to 1,500. At this point, the lumber business is still the main support of the economy, but the area produced huge crops of Malaga grapes and figs (Clovis Centennial Book Committee 2011; Vandor 1919:269).

For the first 21 years, there was no organized government in Clovis. Late in 1911, an election was held, and the City incorporated in 1912. Most of the early businesses in town were located on Front Street, now known as Clovis Avenue, on the west side of the tracks (City of Clovis 1962).

HISTORICAL BACKGROUND FOR THE DEVELOPMENT AREA

The early use of land in the Big Dry Creek region was for cultivation of wheat. Improvements such as the development of the railroad, allowing marketing of more perishable crops, and irrigation canals, providing a steady source of water year round, also encouraged the growth of crops such as grapes. The establishment of orchards and vineyards allowed more profitability with smaller tracts of land, and many pieces of land were subdivided as portions of agricultural colonies.

Much of the Project site is a portion a 160-acre tract first acquired by Rebecca Wilson Norman Strother in 1873 as a land patent. Strother had been born in Mississippi in 1818, and had eight daughters and one son, who died as a child, with her husband. He died in Mississippi in 1868, and she travelled west to Fresno County. Mrs. Strother apparently did not reside on the land, but likely transferred ownership to one of her daughters who did choose to live in the region.

In 1880, Mrs. Strother lived in Santa Rosa with two of her unmarried daughters (Federal census 1880). Her will was prepared at this time, leaving her estate to the two unmarried daughters, and specifically excluding the married daughters. She died in 1883.

One of the daughters, Laura Strother, also acquired land in the area, the land immediately north of the Project site consisting of the northwest quarter of section 21.

William Shipp was married to a Strother daughter, Mary. He brought his family to California in 1868. The Shipps acquired large tracts of land in the Big Dry Creek area, and ran large herds of sheep. It appears that this land may have been part of the Shipp place.

Early maps show the Enterprise Canal near the Project Area. The Enterprise Canal had been constructed by 1891, south of the Project site (Thompson 1891).

In 1891, R. T. Owen owned the south half of section 21, including the land of the Project site. In 1892, he lived in the Temperance Township according to voter records, so it cannot be certain where precisely he lived without further research.

Owen, his father and brother had been farmers and ranchers in the area. He continued to raise grain in the region until 1902. The 1891 map shows a building to the east of the current building on Owen's holding. A 1919 biography describes the R.T. Owen residence as "the first fine house in Clovis," suggesting he lived closer to the early townsite after he sold the Project area.

By 1907, the south half of section 21 and the northeast quarter of the section had been acquired by Hugh Bissell (Official County Map 1907).

Hugh Bissell, a native of Iowa, had farmed for a number of years in Missouri, and came to California in 1885. He first settled in Modesto, then a year later, moved to Fresno County. He had a ranch near Fresno, that he sold in 1898. He leased a tract of about 3,000 acres for dry grain farming. He quit grain farming in 1906, and purchased 320 acres of what was known as the Shipp place for $20 an acre. Bissell also purchased the northeast quarter of the section, so his ranch totaled 480 acres. Bissell wanted to improve the land for intensive farming, so he sank wells and found that the water readily came to the ground surface. Even though others thought it impossible, he installed a

pumping plant for irrigation. With a six-inch centrifugal pump, run by a twenty-horsepower engine, he was able to irrigate the land, and set up the first vineyard above the ditch. He made a success of the vineyard and the orchard on the property, later irrigated by a total of three pumping plants (Vandor 1919; Official Map of Fresno County 1907).

In 1910, the residents of the Project Area included High Bissell, a widower since 1908, his daughter-in-law (widowed in 1909), his grandson William, son Ralph, six hired men, and a house servant (Federal Census 1910). It is not certain where the residents were housed on the property. The large residence appears to date to about 1915.

At various points, Bissell sold off portions of the ranch, and in 1919, had 160 acres, including the much of the Project site. The land had increased in value from $20 an acre to $750 an acre.

In a 1919 biography, Bissell was credited with having developed "a wonderfully productive and valuable place, and erecting a large comfortable residence, constructed of cement blocks, making it one of the show places of the district."

As well as his involvement in viticulture and horticulture, Bissell served as a director for the National Bank of Clovis. Bissell also served with various groups related to the production of raisins (Vandor 1919).

The family remained on the property until an unknown date. By 1920, Hugh Bissell had moved to Fresno. By 1930, his son Raymond had moved with his family to Madera. The later history of ownership and use of the residence is not known.

PROJECT SETTING

Project Site

The Project site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.

- Non-Development Area - Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs). The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area but is outside of the City's existing Sphere of Influence and contains existing single-family residences . Each SubArea is uniquely different and is described below:

- Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
- Expansion SubArea East: Includes single-family residences and agricultural fields located between the Project Site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Surrounding Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

KNOWN CULTURAL RESOURCES

A summary of the record search, field survey, and Native American consultation that was performed for the Project site is included below.

Records Search

A record search has been conducted for the North Shepherd Project site and a 0.25-mile radius through the South San Joaquin Valley Information Center of the California Historical Resources Information System (CHRIS) (RS#22-461, Appendix 2). The Project area includes one recorded resource, P-10-07197. Formerly, the site was a 1909 residence, recorded in 2017 by Peak & Associates. The residence has been removed from the property, and the former location appears to lie in a non-development area, not proposed for housing. Within the search area radius, there are three recorded resources, all historic period resources. They include: P-10-005511, two branches of the Helm Colonial Ditch; P10-005934, a section of the Enterprise Canal; and P-10-007198, a residence at 4707 N. Preuss Avenue.

Field Survey

Peak & Associates conducted a complete, intensive survey of the Project Site in 2017 (FR-3009), recording the historic residence at the southern boundary. One other negative survey for a cell tower was conducted by Lossee in 2006 (FR-02285) in the eastern portion of the Project site. Four other surveys have also been reported within the Project site. Bissonette's 1993 survey is shown to have included hundreds of acres of land in the region including the Project site. However, as noted in the Cultural Assessment, the survey was not plotted correctly by the SSJVC, in part due to the lack of a survey coverage map in the report (FR-01219). Bissonette has noted the survey only spent two days doing fieldwork and walked along the pipelines and channel routes with transects and within a five meter radius of proposed culverts. Varner reportedly surveyed the major portion of the Development Area in 2001 with negative findings. He did note the presence of the historic building (FR-02203), but did not record it during his survey.

NATIVE AMERICAN CONSULTATION

The Project includes an amendment to the General Plan, triggering the need for tribal consultation pursuant to Senate Bill (SB) 18. Pursuant to SB 18, consultation letters were sent via certified mail by the City of Clovis, requesting information related to cultural resources or heritage sites within the Project Site. The letters were sent to the twelve tribal representatives listed in the NAHC response, including: Elizabeth Kipp, Chairperson of the Big Sandy Rancheria of Western Mono Indians; Timothy Perez of the North Valley Yokuts Tribe; Carol Bill, Chairperson of the Cold Springs Rancheria of Mono Indians; Claudia Gonzales, Chairwoman of the Picayune Rancheria of Chukchansi Indians; Robert Ledger, Chairperson of the Dumna Wo-Wah Tribal Government; Brenda Lavell, Chairpersonof the Table Mountain Rancheria; Stan Alec of the Kings River Choinumni Farm Tribe; David Alvarez, Chairperson of the Traditional Choinumni Tribe; Elaine Fink, Chairperson of the North Fork Rancheria of Mono Indians; Neil Peyron, Chairperson of the Tule River Indian Tribe; Katherine Perez, Chairperson of the North Valley Yokuts Tribe; and Kenneth

Woodrow, Chairperson of the Wuksache Indian Tribe/Eshom Valley Band. The City received a response from the Table Mountain Rancheria declining participation, but requesting notification in the event that cultural resources are discovered on the Project site. All consultation correspondence and a contact log are provided in Appendix E.

3.5.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the National Register of Historic Places (NRHP). The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

National Register of Historic Places

The eligibility criteria for the NRHP are as follows (36 CFR 60.4):

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and*
>
> *(A) that are associated with events that have made a significant contribution to the broad patterns of our history and cultural heritage; or*
> *(B) that are associated with the lives of persons significant in our past; or*
> *(C) that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> *(D) that have yielded, or may be likely to yield, information important in prehistory or history.*

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

STATE

California Register of Historic Resources

The California Register of Historical Resources (CRHR) was established in 1992 and codified in the Public Resource Code §5020, 5024 and 21085. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1.

Cultural resources, under CRHR guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the 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 in 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.

California Environmental Quality Act

CEQA Guidelines §15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource,

including archaeological sites, is generally considered a significant impact. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1.

CEQA also provides for the protection of Native American human remains (CCR §15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, but does meet the definition of a "unique" site as outlined in PRC §21083.2, it may still be treated as a significant resource if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- it has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- it is directly associated with a scientifically recognized important prehistoric or historic event.

California Health and Safety Code

§§7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. The CEQA Guidelines (§§15064.5) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. This legislation, which amended §§65040.2, §§65092, §§65351, §§65352, and §§65560, and added §§65352.3, §§653524, and §§65562.5 to the Government Code; also requires the Governor's Office of Planning and Research to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use

decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §§65300 et seq.) and specific plans (defined in Government Code §§65450 et seq.).

Assembly Bill 978

In 2001, Assembly Bill (AB) 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

Assembly Bill 52

AB 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    A) Included or determined to be eligible for inclusion in the CRHR;
    B) Included in a local register of historical resources as defined in PRC §§5020.1(k).
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC §§5024.1 (c). In applying the criteria set forth in PRC §§5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC §§21084.1, a unique archaeological resource as defined in PRC §§21083.2(g), or a "non-unique archaeological resource" as defined in PRC §§21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project is considered to have a significant impact on cultural or tribal cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries;
- 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:
    - 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);
    - 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. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1 Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5 (Less than Significant with Mitigation)

The Project site encompasses approximately 155 acres, encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area. The Development Area Includes the parcels being annexed into the City of Clovis that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review. The Non-Development Area Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. The Non-Development Area is located within the City of Clovis' Planning Area but is outside of the City's existing Sphere of Influence and contains existing single-family residences.

The Project site is not located in an area known to have historical and archaeological resources. However, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation of the following Mitigation Measure would ensure that this potential impact is **less than significant**.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior's Professional Qualifications Standards for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement.*

The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find:

- *If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately and no agency notifications are required.*

- *If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section*

15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the City.

- *If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information*

Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.

Impact 3.5-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Indications suggest that humans have occupied Fresno County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

While no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Mitigation Measure 3.5-1 provides the appropriate procedures if subsurface deposits believed to be human in origin are discovered during construction and/or ground disturbance. This would include all work being halted within a 100-foot radius of the discovery in order for the appropriately qualified professionals to evaluate the find and provide recommendations on how to proceed. If the appropriately qualified professional determines that the find is not human remains, work may resume immediately and no agency notifications are required. However, if the appropriately qualified professional determines that the find is human remains, procedures are outlined in Mitigation Measure 3.5-1 on how to proceed to ensure that the County Coroner is contacted for an evaluation, and appropriate mitigation or treatment measures are developed based on the findings of the coroner. Implementation of Mitigation Measure 3.5-1 as previously stated, would ensure that the potential to disturb human remains, including those interred outside of formal cemeteries, would be reduced to a **less than significant** level.

Impact 3.5-3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: 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), or a resource determined by the lead agency (Less than Significant with Mitigation)

As described under the Consultation heading above, the City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response, including: Elizabeth Kipp, Chairperson of the Big Sandy Rancheria of Western Mono Indians; Timothy Perez of the North Valley Yokuts Tribe; Carol Bill, Chairperson of the Cold Springs Rancheria of Mono Indians; Claudia Gonzales, Chairwoman of the Picayune Rancheria of Chukchansi Indians; Robert Ledger, Chairperson of the Dumna Wo-Wah Tribal Government; Brenda Lavell, Chairpersonof the Table Mountain Rancheria; Stan Alec of the Kings River Choinumni Farm Tribe; David Alvarez, Chairperson of the Traditional Choinumni Tribe; Elaine Fink, Chairperson of the North Fork Rancheria of Mono Indians; Neil Peyron, Chairperson of the Tule River Indian Tribe; Katherine Perez, Chairperson of the North Valley Yokuts Tribe; and Kenneth Woodrow, Chairperson of the Wuksache Indian Tribe/Eshom Valley Band. All consultation correspondence and a contact log are provided in Appendix E.

While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Mitigation Measure 3.5-1 has been incorporated to provide the appropriate procedures if subsurface deposits believed to be tribal resources, and/or human in origin are discovered during construction and/or ground disturbance. This would include all work being halted within a 100-foot radius of the discovery in order for the appropriately qualified professionals to evaluate the find and provide recommendations on how to proceed. If the appropriately qualified professional determines that the find does not represent a resource that might qualify as a tribal resource, work may resume immediately and no agency notifications are required. However, if the appropriately qualified professional determines that the find does represent a resource that might qualify as a tribal resource, procedures are outlined in Mitigation Measure 3.5-1 on how to proceed to ensure that the resource is evaluated, and appropriate mitigation or treatment measures are developed.

As discussed under Impacts 3.5-1 through 3.5-2, development of the proposed project could impact unknown archaeological resources including Native American Tribal artifacts and human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources, including human remains, would be reduced to a **less than significant** level.

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion. This section is based in part on the following:

- *2014 Clovis General Plan* (Placeworks, 2014);
- *2014 Clovis General Plan Draft Program Environmental Impact Report* (Placeworks, 2014);
- *Natural Resources Conservation Service (NRCS) Web Soil Survey* (NRCS, 2022);
- *Geotechnical Engineering Investigation Proposed Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California (*Krazan & Associates, Inc., 2019) (Appendix F); and
- *Fresno County Multi-Jurisdictional Hazard Mitigation Plan* (Amec Foster Wheeler, 2018).

3.6.1 ENVIRONMENTAL SETTING

GEOLOGIC SETTING

Geomorphic Province

The City of Clovis, including the Project site, is located in the southern portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is the principal river in the area and is located just north and west of the City. Alluvial fans formed by this river are the largest geomorphic features in the Clovis area. The formation of the fans has resulted in rather flat regional topography.

Regional Geology

The Project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is a topographically flat, northwest-trending, structural trough (or basin). It is bordered by the Tehachapi Mountains on the south, the Sierra Nevada on the east, the Coast Ranges on the west, and the beginning of the Sacramento Valley to the north.

The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the San Joaquin Valley and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

Local Setting

The Project site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.

Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

FAULTS AND SEISMICITY

Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases results in fault creep. Most faults are the result of repeated displacements over a long period of time.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.6-1 presents the California fault activity rating system.

TABLE 3.6-1: FAULT ACTIVITY RATING

FAULT ACTIVITY RATING	*GEOLOGIC PERIOD OF LAST RUPTURE*	*TIME INTERVAL (YEARS)*
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000-1.6 Million Years
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million

SOURCE: CALIFORNIA GEOLOGICAL SURVEY

Figure 3.6-1 provides a map of known nearby faults in relation to the Project site. The closest known fault to the Project site is the Clovis Fault, which extends northwest-southeast from just north of the Project site. The Clovis Fault is not mapped as active and is mapped as showing no recognized displacement in the Quaternary Period (California Geological Survey, 2010). No other faults within 50 miles of the Project site are mapped on the 2010 Fault Activity Map of California.

Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude-frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with higher numbers being stronger, measures the magnitude of an earthquake relative to ground shaking. Table 3.6-2 provides a description and a comparison of intensity and magnitude.

TABLE 3.6-2: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
Less than 2.0	I	Microearthquakes, not felt or rarely felt; recorded by seismographs.
2.0-2.9	I to II	Felt slightly by some people; damages to buildings.
3.0-3.9	II to IV	Often felt by people; rarely causes damage; shaking of indoor objects noticeable.
4.0-4.9	IV to VI	Noticeable shaking of indoor objects and rattling noises; felt by most people in the affected area; slightly felt outside; generally, no to minimal damage.
5.0-5.9	VI to VII	Can cause damage of varying severity to poorly constructed buildings; at most, none to slight damage to all other buildings. Felt by everyone.
6.0-6.9	VII to X	Damage to a moderate number of well-built structures in populated areas; earthquake-resistant structures survive with slight to moderate damage; poorly designed structures receive moderate to severe damage; felt in wider areas; up to hundreds of miles/kilometers from the epicenter; strong to violent shaking in epicentral area.
7.0-7.9	VIII<	Causes damage to most buildings, some to partially or completely collapse or receive severe damage; well-designed structures are likely to receive damage; felt across great distances with major damage mostly limited to 250 km from epicenter.
8.0-8.9	VIII<	Major damage to buildings, structures likely to be destroyed; will cause moderate to heavy damage to sturdy or earthquake-resistant buildings; damaging in large areas; felt in extremely large regions.
9.0 and Greater	VIII<	At or near total destruction - severe damage or collapse to all buildings; heavy damage and shaking extends to distant locations; permanent changes in ground topography.

SOURCE: AMEC FOSTER WHEELER, 2018, FRESNO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

Although most of Fresno County is situated within an area of relatively low seismic activity, the faults and fault systems that lie along the eastern and western boundaries of Fresno County, as well as

other regional faults, have the potential to produce high-magnitude earthquakes throughout the County (Amec Foster Wheeler, 2018). A high-magnitude earthquake on one of these faults could cause moderate intensity ground shaking in Fresno County. The most probable sources of earthquakes that might cause damage in Clovis are the Owens Valley Fault Group about 68 miles to the northeast, the Foothills Suture Fault Zone approximately 75 miles to the north, the San Andreas fault approximately 80 miles to the southwest, and the White Wolf fault located about 120 miles to the south (Amec Foster Wheeler, 2018). A maximum probable earthquake on any of the major faults would produce a maximum ground acceleration in the area of about 0.1g as ground deceleration generally decreases with increasing distance from the earthquake source. This level of ground shaking correlates to a Modified Mercalli intensity of I to V, light to moderate.

Alquist-Priolo Special Study Zone

An active earthquake fault, per California's Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch (≈11,000 years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42 (SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a project site.

As shown in Figure 3.6-1, the Project site is not within an Alquist-Priolo Special Study Zone. The nearest Alquist-Priolo fault zone, the Nunez Fault Zone, is located approximately 60 miles southwest of the Project site.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking in the Project site is expected during the life of the proposed Project. All structures will be built in accordance with the California Building Code's seismic design standards.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e., earthquake) or slow (i.e., fault creep). Sudden displacements are more damaging to structures because they are accompanied by shaking. The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. The Project site does not have surface expression of active faults and fault rupture is not anticipated. Figure 3.6-1 shows the regional faults in relation to Clovis.

Liquefaction

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground shaking (Amec Foster Wheeler, 2018). Under certain circumstances, the ground shaking can temporarily transform an otherwise solid material to a fluid state. Liquefaction is a serious hazard because buildings in areas that experience liquefaction may subside and suffer major structural damage. Liquefaction is most often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet.

According to the Fresno County MJHMP, no specific countywide assessments to identify liquefaction hazards have been performed; however, areas of the San Joaquin Valley in Fresno County are not considered conducive to liquefaction due to soil types, because they are either too coarse or too high in clay content (2018). To date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Clovis or in the Project site (California Department of Conservation, 2022a). The *Geotechnical Engineering Investigation Proposed Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California (*Krazan & Associates, Inc., 2019) (hereinafter "Geotechnical Report") further indicates that the potential for liquefaction is low since groundwater occurs below 60 feet.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Since the potential for liquefaction is low, the potential for lateral spreading is low; additionally, because the City of Clovis is essentially flat, lateral spreading of soils has not been observed.

Landslides

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized

as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslide potential is influenced by physical factors, such as slope, soil, vegetation, and precipitation. Landslides require a slope, and can occur naturally from seismic activity, excessive saturation, and wildfires, or from human-made conditions such as construction disturbance, vegetation removal, wildfires, etc.

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is low to non-existent.

SOILS

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.2-2 in Section 3.2, Agricultural Resources. Table 3.6-3 identifies the type and range of soils found in the Project site.

TABLE 3.6-3: PROJECT SITE SOILS

SOIL TYPES	*DEVELOPMENT AREA (ACRES)*	*% OF DEVELOPMENT AREA*	*NON-DEVELOPMENT AREA (ACRES)*	*% OF NON-DEVELOPMENT AREA*	*GRAND TOTAL (ACRES)*
An - Alamo clay	0.00	0.00%	0.27	0.35%	0.27
ArA - Atwater sandy loam, 0 to 3 percent slopes	10.85	13.83%	16.21	21.14%	27.07
Gf - Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17	23.05	29.39%	8.49	11.07%	31.55
Gg - Grangeville fine sandy loam, saline alkali	3.36	4.28%	0.09	0.12%	3.44
Re - Ramona loam, hard substratum	20.39	26.00%	30.92	40.32%	51.31
Rh - Riverwash	0.81	1.03%	0.04	0.05%	0.86
SeA - San Joaquin loam, 0 to 3 percent slopes	11.54	14.71%	12.62	16.46%	24.15
TzbA - Tujunga loamy sand, 0 to 3 percent slopes	0.00	0.00%	1.86	2.43%	1.86
VaA - Visalia sandy loam, 0 to 3 percent slopes	8.42	10.74%	6.19	8.07%	14.61
Grand Total	**78.43**	**100.00%**	**76.69**	**100.00%**	**155.12**

SOURCE: NRCS CUSTOM SOIL SURVEY 2022.

Alamo clay. The Alamo series consists of moderately deep to hardpan, poorly drained soils that formed in alluvium from mixed sources. Alamo soils are in basins and drainageways on floodplains and fan remnants. Slope ranges from 0 to 2 percent. Erosion potential is moderate (K factor 0.24). Linear extensibility is high. As shown in Table 3.6-3, this soil type is not found in the development area and 0.35 percent of the non-development area are Alamo clay soils.

Atwater sandy loam. The Atwater series consists of very deep, well drained soils formed in granitic alluvium. This series is characterized as well draining, with moderately rapid permeability and slow runoff. The soils are formed in dunes of uniformly sorted material containing a minimum of coarse and very coarse particles. They have mixed mineralogy. They are used mainly for production of truck crops, grapes, tree fruits, nuts, grain, and alfalfa. Vegetation consists of annual grasses, weeds, and low-growing shrubs. Erosion potential is moderate (K factor 0.24 to 0.28). Linear extensibility is low. As shown in Table 3.6-3, 13.83 percent of the development area and 21.14 percent of the non-development area are Atwater sandy loam.

Grangeville fine sandy loam. This series consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Grangeville soils are on alluvial fans and floodplains and have slopes ranging from 0 to 2 percent. This series is characterized by negligible to very low runoff, moderately rapid permeability and moderate permeability in saline-sodic phases. Erosion potential is low to moderate (K factor 0.10 to 0.28). Linear extensibility is low. As shown in Table 3.6-3, 33.67 percent of the development area and 11.19 percent of the non-development area are Grangeville fine sandy loam.

Ramona loam. The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. The series is well-drained, with slow to rapid runoff and moderately slow permeability. They are used mostly for production of grain, grain-hay, pasture, irrigated citrus, olives, truck crops, and deciduous fruits. Uncultivated areas have a cover of annual grasses, forbs, chamise or chaparral. Erosion potential is moderate to moderately-high (K factor 0.37 to 0.49). Linear extensibility is low-to-moderate. As shown in Table 3.6-3, 26 percent of the development area and 40.32 percent of the non-development area are Ramona loam.

Riverwash. Riverwash consists of very deep alluvial materials in stream channels that are frequently flooded (University of California, Davis, 2022). Little or no vegetation grows on Riverwash because of the flooding. No attempt is made to classify these materials because of the instability of the unit. The unit is subject to erosion and deposition during flooding events. Erosion potential is low to moderate (K factor 0.05 to 0.37). Linear extensibility is low. As shown in Table 3.6-3, 1.03 percent of the development area and 0.05 percent of the non-development area are Riverwash.

San Joaquin loam. The San Joaquin series 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. They are on undulating low terraces with slopes of 0 to 9 percent. The series is characterized by well and moderately well drained, with medium to very high runoff and very slow permeability. They are used for cropland and livestock grazing; crops are small grains, irrigated pasture and rice; vineyards, fruit and nut crops. Erosion potential is moderate (K factor 0.28 to 0.32). Linear extensibility is low-to-high. As shown in Table 3.6-3, 14.71 percent of the development area and 16.46 percent of the non-development area are San Joaquin loam.

Tujunga loamy sand. This series 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. Slopes range from 0 to 12 percent. They are somewhat excessively drained, with negligible to low runoff and high saturated hydraulic conductivity. This soil is used for grazing, citrus,

grapes, other fruits, and urban residential or commercial development. Uncultivated areas have a cover of shrubs, annual grasses and forbs. In urban areas, ornamentals and turf-grass are common. Erosion potential is low to moderate (K factor 0.17 to 0.24). Linear extensibility is low. As shown in Table 3.6-3, 0 percent of the development area and 2.43 percent of the non-development area are Tujunga loamy sand.

Visalia sandy loam. The Visalia series is coarse-loamy, mixed, alluvium derived from granite. This series is well drained with very low runoff. Erosion potential is low to moderate (K factor 0.15 to 0.24). Linear extensibility is low. As shown in Table 3.6-3, 10.74 percent of the development area and 8.07 percent of the non-development area are Visalia sandy loam.

NON-SEISMIC HAZARDS

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided by the NRCS Physical Properties Descriptions:

> "Linear extensibility" refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscape watering.

The *Geotechnical Report* (Krazan & Associates 2019) indicates that the Project site has a low swell potential. According to the NRCS Custom Soils Report, the soils in the Project site generally have a low shrink-swell potential, with the highest potential occurring in the northeastern corner of the Non-Development Area. Additionally, the *Geotechnical Report* (Krazan & Associates 2019) encountered upper soils consisting of silty sand, silty sand with trace clay, clayey sand, silty sand/sand and sand. The report notes that the clayey soils appeared to have a low swell potential.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e., rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two

common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

The NRCS Custom Soils Report identified the erosion potential for the soils in the Project site. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Project site, the erosion factor Kf exhibits a wide range, varying from 0.10 to 0.49, which is considered a low to moderately-high potential for erosion; however, the majority of the Project site, particularly the development area, exhibits an erosion factor Kf of low to moderate. Furthermore, because the Project site is essentially flat, the erosion potential is slight.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the Clovis General Plan or the Fresno County MJHMP as an issue in the Clovis area.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Subsidence has not been identified in the Clovis General Plan or Fresno County MJHMP as an issue in the Clovis area.

PALEONTOLOGICAL RESOURCES

Among the natural resources deserving conservation and preservation, and existing within the City, are the often-unseen records of past life buried in the sediments and rocks below the pavement, buildings, soils, and vegetation which now cover most of the area. These records – fossils and their geologic context – undoubtedly exist in large quantities below the surface in many areas in and near the City of Clovis, and span millions of years in age of origin. Fossils constitute a non-renewable resource; once lost or destroyed, the exact information they contained can never be reproduced.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations. However, even a previously designated low potential site may yield significant fossils. Paleontological resources consist of the fossilized remains of plants and animals, including vertebrates (animals with backbones) and invertebrates (e.g., starfish, clams, ammonites, and coral). Fossils of microscopic plants and animals, or microfossils, are also considered in this analysis. The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found.

Paleontological Setting - City of Clovis

The following summary of the geological evolution of Clovis and the potential for paleontological resources is based on the Clovis General Plan Draft EIR. Clovis is on recent alluvium, Pleistocene river and possibly lake sediments, and pre-Cretaceous meta-sedimentary rocks, and has either low or undetermined paleontological sensitivity.

Recent alluvium is a coarse-grained unconsolidated river wash, typically too young to contain any fossil resources. Thus, it is considered a formation of low paleontological sensitivity. Pre-Cretacious meta-sedimentary rocks have the potential to contain fossils, but they would have been destroyed by present day. Therefore, it is also considered a formation of low sensitivity.

Lastly, Pleistocene river and lake sediments could potentially contain significant nonrenewable paleontological resources. Three sedimentary formations are exposed in Clovis: Modesto Formation (Upper Unit); Riverbank Formation (Middle Unit); and Turlock Lake Formation (Upper Unit). Modesto Formation (Upper Unit) is primarily composed of Sierran arkosic sand and gravel, preceding fine sand and silt near the lower San Joaquin River. Carbon dating determines the Modesto Formation to be 9,000 to 27,000 years old. Riverbank Formation (Middle Unit) is composed of yellowish-brown sandy loam. According to uranium dating, this unit is about 45,000 to 260,000 years old. A vertebrate fauna assigned to the Rancholabrean Land Mammal Age has been found in this unit. The Turlock Lake Formation (Upper Unit) contains stratified silt and fine sand, approximately 600,000 years old. Irvingtonian Land Mammal Age vertebrate fossils have been recovered in several locations in this unit. Thus, the 1993 General Plan EIR concludes that the Pleistocene river and lake sediments are considered an area of undetermined paleontological sensitivity and may contain undiscovered resources.

In addition to the fossils found in the units described above, large mammal bones were discovered in the Clovis river terraces dated to the Pleistocene epoch.

MINERAL RESOURCES

Mineral Resource Classification

Pursuant to the Surface Mining and Reclamation Act of 1975 (SMARA), the California State Mining and Geology Board oversees the Mineral Resource Zone (MRZ) classification system. The MRZ system characterizes both the location and known/presumed economic value of underlying mineral resources. The mineral resource classification system uses four main MRZs based on the degree of available geologic information, the likelihood of significant mineral resource occurrence, and the known or inferred quantity of significant mineral resources. The four classifications are described as follows:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ classification.

Mineral Resources

Mineral resources include commercially viable oil and gas deposits, and nonfuel mineral resources deposits. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. The entire City of Clovis, including the Project site, is designated as MRZ-3 (California Division of Mines and Geology, 1988). MRZ-3 is a classification for areas containing known or inferred mineral occurrences of undetermined mineral resource significance.

Location of Permitted Aggregate Mines

The California Office of Mine Reclamation periodically publishes a list of qualified permitted aggregate mines regulated under SMARA that is generally referred to as the AB 3098 List. The Public Contract Code precludes mining operations that are not on the AB 3098 List from selling sand, gravel, aggregates or other mined materials to State or local agencies. As of March 2022, there are 10 aggregate mines on the AB 3098 list in Fresno County; none of the 10 listed mines are within the Project site (California Department of Conservation, 2022b).

3.6.2 REGULATORY SETTING

FEDERAL

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (42 USC, 7701 et seq.) requires the establishment and maintenance of an earthquake hazards reduction program by the Federal government.

Executive Order 12699

Signed in January 1990, this executive order of the President implements provisions of the Earthquake Hazards Reduction Act for “federal, federally assisted or federally regulated new building construction” and requires the development and implementation of seismic safety programs by Federal agencies.

International Building Code (IBC)

The purpose of the International Building Code (IBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. IBC standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or simply "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CAL Green Code), and the California Reference Standards Code. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

California Health and Safety Code

Section 19100 et seq. of the California Health and Safety Code establishes the State’s regulations for earthquake protection. This section of the code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various "seismic hazard zones."

- Cities and counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

National Pollution Discharge Elimination System (NPDES) Construction General Permit

The California State Water Resource Control Board (SWRCB) Order No. 2009-0009-DWQ known as the "Construction General Permit" was adopted on September 2, 2009 and was amended by Order No 2012-0006-DWQ which became effective on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

- Reduce erosion
- Minimize or eliminate sediment in stormwater discharges
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program
- Eliminate unauthorized non-stormwater discharges from construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
- Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP documents the selection and implementation of Best Management Practices (BMPs) for a specific construction project, charging owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Division of Mines and Geology

The California Division of Mines and Geology (DMG) operates within the Department of Conservation. The DMG is responsible for assisting in the utilization of mineral deposits and the identification of geological hazards.

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Surface Mining and Reclamation Act of 1975 (Section 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition and are readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while also giving consideration to values relating to recreation, wildlife, range and forage, as well as aesthetic enjoyment. Residual hazards to public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified MRZ-2, SMARA would require the jurisdiction to prepare a statement specifying its

reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). Lands classified MRZ-2 are areas that contain identified mineral resources.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to geological hazards and soils. General Plan goals and policies applicable to the Project are identified below:

Environmental Safety Element

- Goal 1: Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural hazards.

- Policy 1.3. Geologic and seismic risk. Prohibit development on unstable terrain, excessively steep slopes, and other areas deemed hazardous due to geologic and seismic hazards unless acceptable mitigation measures are implemented. Require that underground utilities be designed to withstand seismic forces and accommodate ground settlement.

- Policy 1.5. Critical and public facilities. Locate and design critical and public facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions. Ensure critical use facilities (e.g., hospital, police, and fire facilities) can remain operational during an emergency.

City of Clovis Municipal Code

Chapter 8.1 of the Clovis Municipal Code adopts the 2019 CBSC, with amendments to address administrative provisions and additional requirements related to moved buildings, as the building code of the City.

Chapter 9.110 provides subdivision design and improvement requirements. Per Section 9.110.040, a grading plan is required to be submitted to and approved by the City Engineer prior to issuance of a subdivision-level building permit. Subdivisions are required to incorporate appropriate erosion and sediment control measures. Section 9.110.050 requires subdivisions in the City to install an approved sewer connection to the property line of each lot as part of the subdivision improvements.

Chapter 9.114 provides standards for the preparation and review of soils reports. A preliminary soils report based upon adequate test borings and prepared by a registered civil engineer is required for every subdivision for which a final map is required or when required as a condition of development when soils conditions warrant the investigation and report. A final soils report is required where a preliminary soils report was required, unless the final report is waived by the City Engineer.

Section 9.22.070 requires development to comply with the Alquist-Priolo Earthquake Fault Zoning Act and the Safety Element of the City's General Plan.

Chapter 9.28 contains landscaping standards and requires a landscape design plan, irrigation design plan, and soil analysis in order to reduce runoff and control soil erosion as part of the landscape documentation package.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on geology and soils and/or mineral resources if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo 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;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction; or
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- 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;
- 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;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- 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; and/or
- 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.

There are no significant deposits of mineral resources located on the Project site, as delineated by the Mineral Resources and Mineral Hazards Mapping Program. Additionally, the Project site is not designated as a Mineral Resource Zone and there are no existing mines located on the Project site. Therefore, the proposed Project would have no impact on mineral resources or mineral resource recovery sites and these impacts will not be discussed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The proposed Project may expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides (Less than Significant)

Development of the proposed Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure, including liquefaction, or landslides. Each are discussed below:

GROUND RUPTURE

The California Geologic Survey (CGS) evaluates faults and determines if a fault should be zoned as active, potentially active, or inactive. All active faults are incorporated into a Special Studies Zone, also referred to as an Alquist-Priolo Special Study Zone. The Project site is not within an Alquist-Priolo Special Study Zone.

The closest known fault to the Project site is the Clovis Fault, which extends northwest-southeast from just north of the Project site. The Clovis Fault is not mapped as active and is mapped as showing no recognized displacement in the Quaternary Period (California Geological Survey, 2010). No other faults within 50 miles of the Project site are mapped on the 2010 Fault Activity Map of California. Therefore, because no faults are located on the Project sites, the potential for ground rupture (cracking or breaking of the ground during an earthquake) would be less than significant.

GROUND SHAKING

Although most of Fresno County is situated within an area of relatively low seismic activity, the faults and fault systems that lie along the eastern and western boundaries of Fresno County, as well as other regional faults, have the potential to produce high-magnitude earthquakes throughout the County. A high-magnitude earthquake on one of these faults could cause moderate intensity ground shaking in Fresno County. The most probable sources of earthquakes that might cause damage in Clovis are the Owens Valley Fault Group about 68 miles to the northeast, the Foothills Suture Fault Zone approximately 75 miles to the north, the San Andreas fault approximately 80 miles to the southwest, and the White Wolf fault located about 120 miles to the south. A maximum probable earthquake on any of the major faults would produce a maximum ground acceleration in the area of about 0.1g as ground deceleration generally decreases with increasing distance from the

earthquake source. This level of ground shaking correlates to a Modified Mercalli intensity of I to V, light to moderate.

To reduce the impact of seismic ground shaking on the development, the Project would be required to be constructed using standard engineering and seismic safety design techniques of the California Building Code, as required by Chapter 8.1 of the City's Municipal Code. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures would be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

LIQUEFICATION

Substantial hazards from liquefaction are not expected in areas of the San Joaquin Valley in Fresno County because they are either too coarse or too high in clay content. To date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Clovis or in the Project site. In addition, the Geotechnical Report (Krazan & Associates 2019) indicates that the potential for liquefaction on the Project site is low since groundwater occurs below 60 feet. Therefore, this is a less than significant impact.

LANDSLIDES

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is low to non-existent. Some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements. Additionally, according to the California Earthquake Hazards Zone Application, the site is not located within a Landslide and Liquefication Zone. As a result, the probability of landslides causing substantial adverse effects on people or structures is less than significant.

CONCLUSION

The Project site is subject to potential ground shaking caused by seismic activity. Seismic activity could come from a known active fault such as the Clovis fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.6.2 Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these requirements, which have been adopted by the City of Clovis (Chapter 8.1), including design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 of the California Building Code specifically provides structural design standards for earthquake loads.

The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. Therefore, the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-2: Implementation and construction of the proposed Project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion and the loss of topsoil is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, stormwater runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed Project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

> *"…Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing stormwater contamination, and sediment control techniques should be used to capture any soil that becomes eroded…"*

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

"Sediment control BMPs should be the secondary means of preventing stormwater contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed…Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions…All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended…"

To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency.

The Custom Soils Report identified the erosion potential for the majority of soils in the Project site as low to moderate. Furthermore, because the Project site is essentially flat, the erosion potential is considered slight. Regardless of the potential for erosion, there is always the potential for human caused erosion associated with construction activities or through the operational phase of a project. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities temporarily expose soils and increase the potential for soil erosion and sedimentation during rail events. Construction activities can also result in soil compaction and wind erosion effects that can adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code, and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations

would ensure that the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse (Less than Significant)

Development of the proposed Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with ground instability or failure. Soils and geologic conditions in the Project site have the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Each are discussed below:

LIQUEFACTION

As discussed in Impact 3.6-1, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Clovis, including the Project site. In addition, the Geotechnical Report (Krazan & Associates 2019) indicates that the potential for liquefaction on the Project site is low since groundwater occurs below 60 feet.

LATERAL SPREADING

Lateral spreading generally is a phenomenon where blocks of intact, non-liquefied soil move down slope on a liquefied substrate of large areal extent. The potential for liquefaction at the Project site is low; therefore, the potential for lateral spreading of soils is also low.

LANDSLIDES

As discussed in Impact 3.6-1, the Project site is essentially flat and, to date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced landslide zones in the City of Clovis or in the Project site. Therefore, the potential for a landslide in the Project site is low to non-existent.

COLLAPSIBLE SOILS

Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Collapsible soils have not been identified in the Clovis General Plan or the Fresno County MJHMP as an issue in the Clovis area.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly

accelerated) as a result of human activities. Subsidence has not been identified in the Clovis General Plan or Fresno County MJHMP as an issue in the Clovis area.

CONCLUSION

The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. Through compliance with applicable laws, standards, and guidelines, (including the CBSC and City's Municipal Code), the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-4: The proposed Project has the potential to result in development 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. (Less than Significant)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. According to the NRCS Web Soil Survey, the soils in the Project site have a low shrink-swell potential. Additionally, the Geotechnical Report (Krazan & Associates 2019) encountered upper soils consisting of silty sand, silty sand with trace clay, clayey sand, silty sand/sand and sand. The report notes that the clayey soils appeared to have a low swell potential.

The California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when a preliminary geotechnical evaluation determines that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. The City of Clovis also requires a final soils report to be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations. Compliance with this requirement would occur in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final soils report would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. Through compliance with applicable laws, standards, and guidelines, (including the CBSC and City's Municipal Code), the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-5: The proposed Project does not have the potential to 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 (Less than Significant)

The proposed Project involves the sphere of influence expansion (SOI) of approximately 155 acres into the City of Clovis' SOI, including the annexation of the proposed 77-acre Development Area, to develop single-family detached units, open space, parks and recreational uses, and new public and private roadways and utility improvements (water, storm drainage, sanitary sewer). Septic tanks or

septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The Development Area would be served by a new wastewater distribution system installed within the roadway right-of-way and connecting to each new house that is constructed. The proposed wastewater conveyance facilities would connect to the existing sewer main(s) along nearby roadway(s) as part of the City of Clovis collection and treatment system.

The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

Development of the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-6: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant with Mitigation)

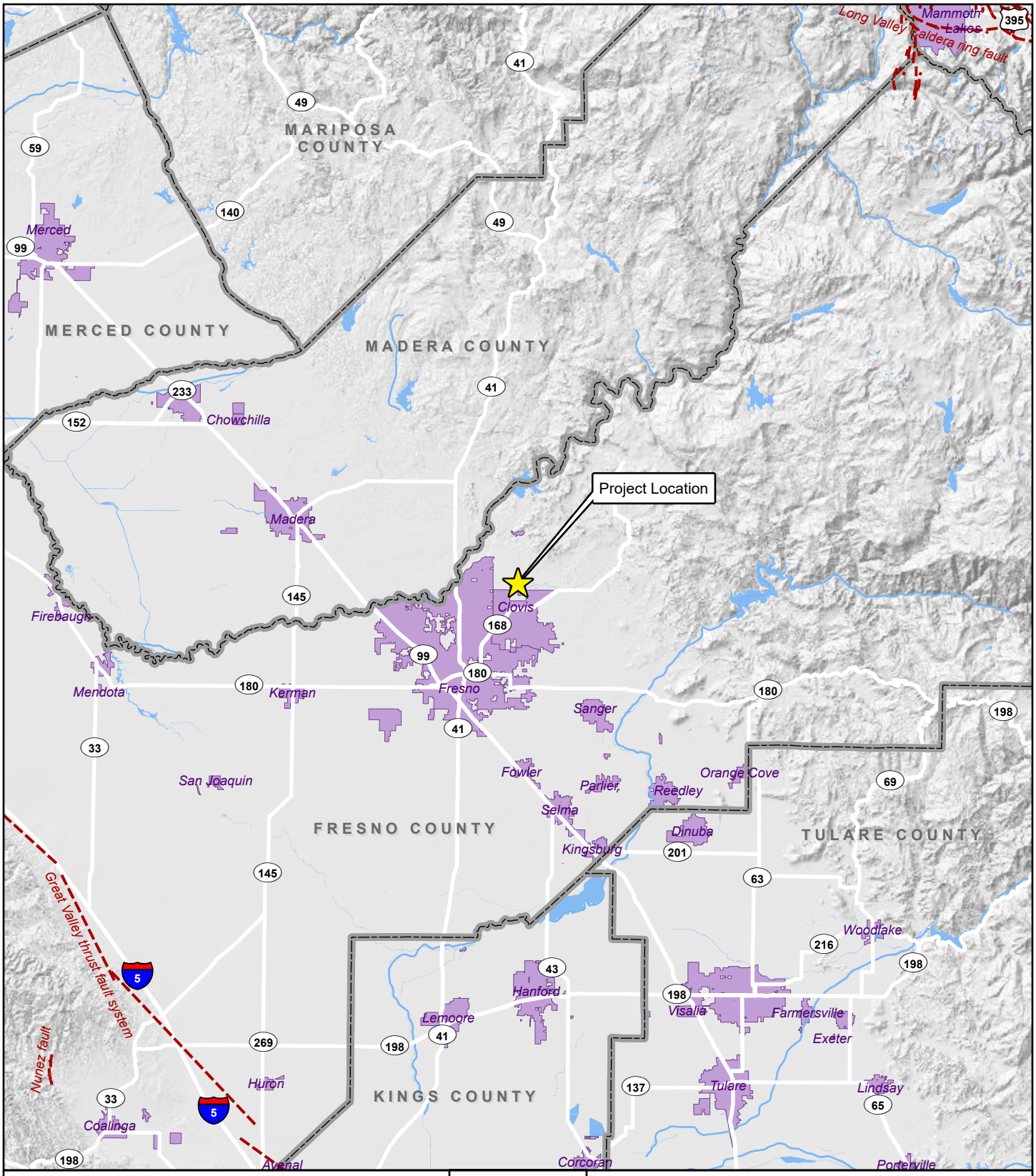
Although the Project site is not expected to contain subsurface paleontological resources, the Project site is in an area known to have these resources and it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-1: *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*

Impact 3.6-7: The proposed Project has the potential to result in the loss of availability of a locally-important mineral resource recovery site or known mineral resource of value to the region and the residents of the state. (Less than Significant)

The entire City of Clovis, including the Project site, is designated as MRZ-3 (California Division of Mines and Geology, 1988). MRZ-3 is a classification for areas containing known or inferred mineral occurrences of undetermined mineral resource significance. As of March 2022, there are 10 aggregate mines on the AB 3098 list in Fresno County; none of the 10 listed mines are within the Project site (California Department of Conservation, 2022b). There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a **less than significant** impact relative to this topic.



LEGEND

- County Boundary
- Incorporated Area
- Quaternary Fault

N

0 2½ 5

Miles

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 3.6-1. Earthquake Faults Map

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the Development Area to urban uses. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the proposed Project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed Project. Disclosure and discussion of the Project's estimated energy usage and greenhouse gas emissions are provided.

There were two comments received during the Notice of Preparation (NOP) comment period regarding greenhouse gases. One comment was provided from the San Joaquin Air Pollution Control District (June 10, 2022), while another comment was provided by George Gonzalez (June 10, 2022). All comments are included in Appendix A.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 440 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2016 (California Air Resources Board, 2018a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41% of total GHG emissions in the State. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate

Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain

uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry, reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large of wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33% of electricity generated from renewable resources by 2020, 60 percent by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under AB 100).

Overall, in 2018, California's per capita energy usage was ranked fourth-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e. fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles, results in GHG emissions that contribute to global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. In 2016, more than one-fourth of the electricity supply comes from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from nuclear generating stations (U.S. EIA, 2020a). In 2016, approximately 50 percent of California's utility-scale net electricity generation was fueled by natural gas. In addition, about 25 percent of the State's utility-scale net electricity generation came from non-hydroelectric renewable technologies, such as solar, wind, geothermal, and biomass. Another 14 percent of the State's utility-scale net electricity generation came from hydroelectric generation, and nuclear energy powered an additional 11 percent. The amount of electricity generated from coal negligible (approximately 0.2 percent) (U.S. EIA, 2020a). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed by the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2020b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2021, electricity consumption in Fresno County was 8,378 GWh (California Energy Commission, 2023).

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2016, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 96 percent of the State's transportation energy needs.

Natural Gas/Propane

The State produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). In 2006, California produced 325.6 billion cubic feet of natural gas (California Energy Commission, 2012). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the Fresno County area. In 2021, natural gas consumption in Fresno County was 318 million therms (California Energy Commission, 2023).

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor National Ambient Air Quality Standards (NAAQS) vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

On April 2, 2007, in the court case of *Massachusetts et al. vs. the USEPA et al*. (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the Federal Clean Air Act (42 USC Sections 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the USEPA developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, State, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR," "Climate Leaders," and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

In 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

STATE

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions all across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing

the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB "Scoping Plans" intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

Statutes Setting Statewide GHG Reduction Targets

ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Safety Code Section 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

SENATE BILL 32

SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that "[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger's 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction 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. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created and established a "new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below

1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that "[t]he Legislature finds and declares [that] … [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification." Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

ASSEMBLY BILL 1279

Assembly Bill 1279, passed in 2022, declares the State's objective to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas emissions thereafter. This is in addition to, and does not replace or supersede, Statewide greenhouse gas emissions reduction targets.

Statute Setting Target for the Use of Renewable Energy for the Generation of Electricity

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

In 2002, the Legislature enacted Senate Bill 1078 (Stats. 2002, ch. 516), which established the Renewables Portfolio Standard program, requiring retail sellers of electricity, including electrical corporations, community choice aggregators, and electric service providers, to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. (See Pub. Utilities Code, Section 399.11 et seq. [subsequently amended].) The legislation set a target by which 20 percent of the State's electricity would be generated by renewable sources. (Pub. Utility Code, Section 399.11, subd. (a) [subsequently amended].) As described in the Legislative Counsel's Digest, Senate Bill 1078 required "[e]ach electrical corporation … to increase its total procurement of

eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales are procured from eligible renewable energy resources. If an electrical corporation fails to procure sufficient eligible renewable energy resources in a given year to meet an annual target, the electrical corporation would be required to procure additional eligible renewable resources in subsequent years to compensate for the shortfall, if funds are made available as described. An electrical corporation with at least 20 percent of retail sales procured from eligible renewable energy resources in any year would not be required to increase its procurement in the following year."

In 2006, the Legislature enacted Senate Bill 107 (Stats. 2006, ch. 464), which modified the Renewables Portfolio Standard to require that at least 20 percent of electricity retail sales be served by renewable energy resources by year 2010. (Pub. Utility Code, Section 399.11, subd (a) [subsequently amended].)

Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1) set even more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State's electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, Section 399.11 et seq. [subsequently amended].)

SB 350, discussed above, increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, Section 399.11, subd (a); see also Section 399.30, subd. (c)(2).) Of equal significance, Senate Bill 350 also embodies a policy encouraging a substantial increase in the use of electric vehicles. As noted earlier, Section 740.12(b) of the Public Utilities Code now states that the PUC, in consultation with CARB and the CEC, must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

Executive Order, B-16-12, issued in 2012, embodied a similar vision of a future in which zero-emission vehicles (ZEV) will play a big part in helping the State meet its GHG reduction targets. Executive Order B-16-12 directed State government to accelerate the market for in California through fleet replacement and electric vehicle infrastructure. The Executive Order set the following targets:

- By 2015, all major cities in California will have adequate infrastructure and be "ZEV ready";
- By 2020, the State will have established adequate infrastructure to support 1 million ZEVs in California;
- By 2025, there will be 1.5 million ZEVs on the road in California; and
- By 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

In 2018, Senate Bill 100 (Stats. 2018, ch. 312) revised the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

In summary, California has set a statutory goal of requiring that, by the 2030, 60 percent of the electricity generated in California should be from renewable sources, with increased generation capacity intended to sufficiently allow the mass conversion of the statewide vehicle fleet from petroleum-fueled vehicles to electrical vehicles and/or other ZEVs. By 2045, all electricity must come from renewable resources and other carbon-free resources. Former Governor Brown had an even more ambitious goal for the State of achieving carbon neutrality as soon as possible and by no later than 2045. The Legislature is thus looking to California drivers to buy electric cars, powered by green energy, to help the State meet its aggressive statutory goal, created by SB 32, of reducing statewide GHG emissions by 2030 to 40 percent below 1990 levels. Another key prong to this strategy is to make petroleum-based fuels less carbon-intensive. A number of statutes in recent years have addressed that strategy. These are discussed immediately below.

Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels

ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS

In 2002, the Legislature enacted Assembly Bill 1493 ("Pavley Bill") (Stats. 2002, ch. 200), which directed the CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health and Safety Code Section 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the "Pavley standards." In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created are what are commonly known as the "Pavley II standards." (See California Code of Regulations, Title 13, Sections 1900, 1961, and 1961.1 et seq.)

In 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell

electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, Sections 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley standards will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists' costs.

Cap and Trade Program

In 2011, CARB adopted the final Cap-and-Trade Program for California (See California Code of Regulations, Title 17, Sections 95801-96022.) The California cap-and-trade program creates a market-based system with an overall emissions limit for affected sectors. The program is intended to regulate more than 85 percent of California's emissions and staggers compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2012); (2) fuel combustion and transportation (2015).

According to 2012 CARB guidance, "[t]he Cap-and-Trade Program will reduce GHG emissions from major sources (covered entities) by setting a firm cap on statewide GHG emissions while employing market mechanisms to cost-effectively achieve the emission-reduction goals. The statewide cap for GHG emissions from major sources, which is measured in metric tons of carbon dioxide equivalent (MTCO2e), will commence in 2013 and decline over time, achieving GHG emission reductions throughout the program's duration. Each covered entity will be required to surrender one permit to emit (the majority of which will be allowances, entities are also allowed to use a limited number of CARB offset credits) for each ton of GHG emissions they emit. Some covered entities will be allocated some allowances and will be able to buy additional allowances at auction, purchase allowances from others, or purchase offset credits."

The guidance goes on to say that "[s]tarting in 2012, major GHG-emitting sources, such as electricity generation (including imports), and large stationary sources (e.g., refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food processing plants) that emit more than 25,000 $MTCO_2e$ per year will have to comply with the Cap-and-Trade Program. The program expands in 2015 to include fuel distributors (natural gas and propane fuel providers and transportation fuel providers) to address emissions from transportation fuels, and from combustion of other fossil fuels not directly covered at large sources in the program's initial phase." In early April 2017, the Third District Court of Appeal upheld the lawfulness of the Cap-and-Trade program as a "fee" rather than a "tax." (See *California Chamber of Commerce et al. v. State Air Resources Board et al.* (2017) 10 Cal.App.5th 604.)

AB 398 (Stats. 2017, ch. 135) extended the life of the existing Cap and Trade Program through December 2030.

Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives

CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for 2020 and 2035. Each of California's metropolitan planning organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region's federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed, which demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

Climate Change Scoping Plans

AB 32 SCOPING PLAN

In 2008, CARB adopted the Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) CO_2e, or approximately 22 percent from the State's projected 2020 emission level of 545 MMT of CO_2e under a business-as-usual scenario. This is a reduction of 47 MMT CO_2e, or almost 10 percent, from 2008 emissions. CARB's original 2020 projection was 596 MMT CO_2e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008. The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of the State GHG inventory. CARB estimates the largest reductions in GHG emissions would be by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (26.1 MMT CO_2e);
- the Low Carbon Fuel Standard (15.0 MMT CO_2e);
- energy efficiency measures in buildings and appliances (11.9 MMT CO_2e); and
- renewable portfolio and electricity standards for electricity production (23.4 MMT CO_2e).

In 2011, CARB adopted a Cap-and-Trade regulation. The Cap-and-Trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The Cap-and-Trade program includes an enforceable emissions cap that will decline over time. The State distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap are required to surrender allowances and offsets equal to their emissions at the end of each compliance period. Enforceable compliance obligations started in 2013. The program applies to facilities that comprise 85 percent of the State's GHG emissions.

With regard to land use planning, the Scoping Plan expects that reductions of approximately 3.0 MMT CO_2e will be achieved through implementation of Senate Bill (SB) 375, which is discussed further below.

2014 SCOPING PLAN UPDATE

CARB revised and reapproved the Scoping Plan and prepared the First Update to the 2008 Scoping Plan in 2014 (2014 Scoping Plan). The 2014 Scoping Plan contains the main strategies California will implement to achieve a reduction of 80 MMT of CO_2e emissions, or approximately 16 percent, from the State's projected 2020 emission level of 507 MMT of CO_2e under the business-as-usual scenario defined in the 2014 Scoping Plan. The 2014 Scoping Plan also includes a breakdown of the amount of GHG reductions CARB recommends for each emissions sector of the State's GHG inventory. Several strategies to reduce GHG emissions are included: the Low Carbon Fuel Standard, the Pavley Rule, the ACC program, the Renewable Portfolio Standard, and the Sustainable Communities Strategy.

2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provides additional direction for developing the scoping plan. In response, CARB adopted an updated Scoping Plan in December 2017. The document reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) - maintaining existing GHG standards for light- and heavy-duty vehicles, put 4.2 million zero-emission vehicles on the roads, and increase zero-emission buses, delivery and other trucks;
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY

For the first time, the 2022 Scoping Plan includes modeling and quantification of GHG emissions and carbon sequestration in natural and working lands (NWL). To date, the focus has been only on reducing the emissions of GHGs from our transportation, energy, and industrial sectors. The state's 2020 and 2030 GHG reductions targets only include these sources, as they are the primary drivers of climate change and disproportionate harmful air pollution in our vulnerable communities. The 2022 Scoping Plan, through the lens of carbon neutrality, expands the scope to more meaningfully consider how our NWL contribute to our long-term climate goals.

Four scenarios were extensively modeled to develop this Scoping Plan, with the objective of informing the most viable path to remain on track to achieve our 2030 GHG reduction target: a reduction in anthropogenic emissions by 85% below 1990 levels and carbon neutrality by 2045. All four have their merits and are informed by stakeholder input. The scenario ultimately chosen as the basis of the 2022 Scoping Plan is the alternative that most closely aligns with existing statute and Executive Orders. It was selected because it best achieves the balance of cost-effectiveness, health benefits, and technological feasibility.

Building Code Requirements Intended to Reduce GHG Emissions

CALIFORNIA ENERGY CODE

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2019 Building Energy Efficiency Standards, commonly referred to as the "Title 24" standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost-effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.

- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

The most recent Title 24 standards are the 2022 Title 24 standards. The 2022 Building Energy Efficiency Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings permitted on or after January 1, 2023, must comply with the 2022 Standards. The California Energy Commission updates the standards every three years.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The purpose of the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) is to improve public health and safety and to promote the general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: 1) planning and design; 2) energy efficiency; 3) water efficiency and conservation; 4) material conservation and resource efficiency; and 5) environmental quality. The California Green Building Standards, which became effective on January 1, 2011, instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential uses, and State-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;
- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards.

The voluntary standards require the following:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof.
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to greenhouse gases. General Plan goals and policies applicable to the Project are identified below:

Policies: Circulation Element

- Goal 1: A context-sensitive and "complete streets" transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs.
- Policy 1.1: Multimodal network. The city shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.
- Policy 1.2: Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
- Policy 1.3: Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
- Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.
- Policy 1.5: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).
- Policy 1.6: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
- Policy 1.7: Narrow streets. The City may permit curb-to-curb dimensions that are narrower than current standards on local streets to promote pedestrian and bicycle connectivity and enhance safety.
- Policy 1.8: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate.
- Goal 4: A bicycle and transit system that serves as a functional alternative to commuting by car.
- Policy 4.1: Bike and transit backbone. The bicycle and transit system should connect Shaw Avenue, Old Town, the Medical Center/R&T Park, and the three Urban Centers.
- Policy 4.2: Priority for new bicycle facilities. Prioritize investments in the backbone system over other bicycle improvements.
- Policy 4.3: Freeway crossings. Require separate bicycle and pedestrian crossings for new freeway extensions and encourage separate crossings where Class I facilities are planned to cross existing freeways.
- Policy 4.4: Bicycles and transit. Coordinate with transit agencies to integrate bicycle access and storage into transit vehicles, bus stops, and activity centers.
- Policy 4.5: Transit stops. Improve and maintain safe, clean, comfortable, well-lit, and rider-

friendly transit stops that are well marked and visible to motorists.

- Policy 4.6: Transit priority corridors. Prioritize investments for, and transit services and facilities along the transit priority corridors.
- Policy 4.7: Bus rapid transit. Plan for bus rapid transit and transit-only lanes on transit priority corridors as future ridership levels increase.
- Goal 5: A complete system of trails and pathways accessible to all residents.
- Policy 5.1: Complete street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety, consistent with the Bicycle Transportation Master Plan and other master plans.
- Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
- Policy 5.3: Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
- Policy 5.4: Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
- Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.
- Goal 6: Safe and efficient goods movement with minimal impacts on local roads and neighborhoods.
- Policy 6.1: Truck routes. Plan and designate truck routes that minimize truck traffic through or near residential areas.
- Policy 6.2: Land use. Place industrial and warehousing businesses near freeways and truck routes to minimize truck traffic through or near residential areas.

Policies: Air Quality Element

- Goal 1: A local environment that is protected from air pollution and emissions.
- Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.
- Policy 1.2: Sensitive Land Uses. Prohibit, without sufficient mitigation, the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board.
- Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
- Policy 1.4: City buildings. Require that municipal buildings be designed to exceed energy and water conservation and greenhouse gas reduction standards set in the California Building Code.
- Policy 1.5: Fleet operations. Purchase low- or zero-emission vehicles for the city's fleet

where feasible. Use clean fuel sources for city-owned mass transit vehicles, automobiles, trucks, and heavy equipment where feasible.

- Policy 1.6: Alternative fuel infrastructure. Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.
- Policy 1.7: Employment measures. Encourage employers to provide programs, scheduling options, incentives, and information to reduce vehicle miles traveled by employees.
- Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
- Goal 2: A region with healthy air quality and lower greenhouse gas emissions.
- Policy 2.1: Regional coordination. Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.
- Policy 2.2: Cross-jurisdictional issues. Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.
- Policy 2.3: Valleywide programs. Establish parallel air quality programs and implementation measures with other communities across the San Joaquin Valley.
- Policy 2.4: Public participation. Encourage participation of local citizens, the business community, and interested groups and individuals in air quality planning and implementation.
- Policy 2.5: Public education. Promote programs that educate the public about regional air quality issues and solutions.
- Policy 2.6: Innovative mitigation. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.

3.7.3 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed Project would do any of the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Based on these standards and significance thresholds and criteria, the Project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant impact through the application of mitigation, it is categorized as a "significant unavoidable impact."

ANALYSIS APPROACH AND METHODOLOGY

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the *combined* effects from *both* the proposed Project *and* other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the project's *incremental* effects are cumulatively considerable" and thus significant in and of themselves. The cumulative global project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe. No project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate, but rather effects are shown to be caused by the cumulative emissions from across the globe. However, legislation and executive orders on the subject of climate change in California have established a Statewide context and process for developing an enforceable Statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

The baseline against which to compare potential impacts of the Project includes the natural and anthropogenic drivers of global climate change, including worldwide GHG emissions from human activities that have increased by about 90 percent since 1970.[1] As a result, the study area for climate change and the analysis of GHG emissions is broad. However, the study area is also limited by CEQA Guidelines Section 15064.4(b), which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact, which may be caused by the Project.

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. CEQA Guidelines Section 15064.7 provides lead agencies the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, as long as any threshold chosen is supported by substantial evidence. The City of Clovis has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Similarly, the SJVACPD, the Governor's Office of Planning and Research, CARB, California Air Pollution Control Officers Association

[1] U.S. EPA, Global Greenhouse Gas Emissions Data, https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed July 14, 2022.

(CAPCOA), or any other State or applicable regional agency has yet to adopt a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Therefore, the significance of the Project's potential impacts with regard to GHG emissions and climate change will be assessed solely on its consistency with plans and policies adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change and the Project's ability to incorporate sustainable features and strategies in its design to reduce GHG emissions. The analysis has also quantified the Project's GHG emissions for informational purposes. The methodology for quantifying GHG emissions is the same as the methodology for quantifying criteria pollutants and is discussed in detail in Section 5.3, Air Quality, and in Appendix C, of this Draft EIR.

THRESHOLDS OF SIGNIFICANCE (ENERGY CONSERVATION)

Consistent with Appendices F and G of the CEQA Guidelines, energy-related impacts are considered significant if implementation of the proposed Project would do the following:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation;
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In order to determine whether or not the proposed Project would result in a significant impact on energy use, this EIR includes an analysis of proposed Project energy use, as provided under *Impacts and Mitigation Measures* below.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Less than Significant)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the proposed Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 and other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O), from mobile sources and utility usage.

The proposed Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)^{TM}. CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use

planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., MT CO_2e), based on the global warming potential of the individual pollutants.

SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are summarized in Table 3.7-1. These emissions include all worker vehicle, vendor vehicle, hauler vehicle, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on input from the Project Proponents, the proposed Project is assumed to commence construction in 2023 and finish in 2028. It should be noted that this schedule is an approximation and may change over time. A regularized construction schedule was utilized for modelling purposes for the sake of simplicity.

TABLE 3.7-1: MAXIMUM CONSTRUCTION GHG EMISSIONS (MITIGATED AVERAGE MT CO_2E/YEAR)

YEAR	BIO- CO_2	NON-BIO- CO_2	TOTAL CO_2	CH_4	N_2O	CO_2E
2028	0	762.7	762.7	0.1	<0.1	776.8

SOURCE: CALEEMOD (SEE APPENDIX C FOR DETAIL)

As presented in the table above, short-term construction emissions of GHGs are estimated at a maximum of approximately 776.8 MT CO_2e per year.

OPERATIONAL GHG EMISSIONS

The operational GHG emissions estimate for the proposed Project includes on-site area, energy, mobile, waste, and water emissions generated by the Project during its operation. Estimated GHG emissions associated with the proposed Project are summarized in Table 3.7-2, below. It should be noted that CalEEMod does not account for the Governor Newsom's Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035. Additionally, the CalEEMod modeling conducted does not account for the incorporation of additional Renewables Portfolio Standard attainment beyond CalEEMod defaults, incorporation of AB 341, and incorporation of Title 24 requirements for the EV charging stations. This is anticipated to substantially reduce the operational emissions associated with passenger vehicles (i.e. mobile emissions), energy emissions, and waste emissions, over time, including prior the 2035 final implementation year. Therefore, the operational emissions results are likely an overestimate for mobile, energy, and waste emissions. As shown in the following table, as conservatively modeled, the annual GHG emissions associated with the proposed Project would be approximately 5,071 MT CO_2e.

TABLE 3.7-2: OPERATIONAL GHG EMISSIONS AT BUILDOUT (METRIC TONS/YEAR)

	Bio- CO_2	*Non-Bio- CO_2*	*Total CO_2*	*CH_4*	*N_2O*	*CO_2E*
Area	0	7.3	7.3	<0.1	0	7.5
Energy	0	1,222.4	1,222.4	0.1	<0.1	1,231.4
Mobile	0	3,371.2	3,371.2	0.2	0.2	3,435.4
Waste	126.5	0	126.5	7.5	0	313.4
Water	12.5	29.4	42.0	1.3	<0.1	83.4
Total	**139.0**	**4,630.4**	**4,769.4**	**9.1**	**0.3**	**5,071.1**

SOURCE: CALEEMOD (SEE APPENDIX C FOR DETAIL)

Pacific Gas & Electric (PG&E), the electrical service provider for the Project site, will need to continue to annually increase renewable electricity through 2045 in order to meet the carbon-free electricity target set by SB 100. The Project would need to comply with AB 341, which set a target of reducing landfill waste by 75 percent by 2020, and the Title 24 standards, which require incorporation of rooftop PV systems and solar panels, as well as electric vehicle charging capabilities. The potential reductions in GHG emission associated with this requirement were not incorporated in the reductions, as the amount would be confirmed at a later stage; therefore, the operational emissions shown in Table 3.7-2 are conservative.

PROJECT CONSISTENCY WITH APPLICABLE PLANS

Several plans and policies have been adopted to reduce GHG emissions in the San Joaquin Valley region. The Project's consistency with the State's 2022 Scoping Plan, as well as the Fresno Council of Governments' (Fresno COG's) 2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), and the City of Clovis General Plan are discussed below.

The CARB's 2022 Scoping Plan

The 2022 Scoping Plan strategies that are applicable to the Project include reducing fossil fuel use, energy demand, and vehicle miles traveled (VMT); maximizing recycling and diversion from landfills; and increasing water conservation. The Project would be consistent with these goals through Project design, which includes complying with the latest requirements of the CALGreen Code and Building Energy Efficiency Standards, providing EV parking spaces and charging equipment, and complying with the AB 341 waste diversion goal of 75 percent. In addition, the Project would receive electricity from PG&E, which is required to reduce GHG emissions by increasing procurement from eligible renewable energy by set target years. Moreover, the Project would reduce VMT and energy demand, thereby reducing GHG emissions, by constructing residences in a time of housing shortage in California, which would provide housing opportunities to those who already live near the Project Site or in the San Joaquin Valley, providing new housing opportunities near multiple public transit options; providing extensive pedestrian connectivity to encourage alternative modes of transportation; and incorporating a number of sustainable design features, including, but not limited, to installation of energy-efficient light fixtures, high-efficiency plumbing fixtures, EV parking spaces, and rooftop PV systems and solar panels, consistent with the requirements of the latest (2022) version of the Title 24 Energy Code, or better. Therefore, the Project would be consistent with the 2022 Scoping Plan.

Fresno COG 2022 RTP/SCS

The Fresno COG's 2022 RTP/SCS includes five goals with corresponding policies and actions for improved mobility, communities accessible by sustainable transportation options, a multi-faceted multimodal transportation network, a transportation network that supports a sustainable and vibrant economy, and a region that embraces clean transportation, technology, and innovation. These strategies include similar measures to the 2022 Scoping Plan, such as supporting lower-carbon and sustainable transportation options. The Project's consistency with the applicable 2022 RTP/SCS strategies is discussed in Table 3.7-3, below. As shown therein, the Project would be consistent with the GHG emissions reduction strategies contained in the Fresno COG's 2022 RTP/SCS.

TABLE 3.7-3: PROJECT CONSISTENCY WITH THE FRESNO COG'S 2022 RTP/SCS

GOAL	*PROJECT CONSISTENCY*
Goal 1: Improved mobility and accessibility for all	No Conflict. The Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. The Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas. Specifically, the proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south. These park and trail connections would provide pedestrian and bicycle connections to neighboring communities.
Goal 2: Vibrant communities that are accessible by sustainable transportation options	No Conflict. As stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, The Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling, as well as enhancing the vibrancy of the Project and neighboring communities.
Goal 3: A safe, well-maintained, efficient, and climate-resilient multimodal transportation network	No Conflict. As stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, the Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling. Furthermore, the Project would be developed using the latest State and local requirements relating to safety and security. Development of the Project site would include other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, other pedestrian facilities, private parking, street lighting, and street signage, which would enhance the safety and security of the site and it surroundings, by connecting to existing development, thus ensuring a safe, well-maintained, efficient, and climate-resilient multimodal transportation network.
Goal 4: A transportation	No Conflict. The State of California is currently in a housing crisis. The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing

network that supports a sustainable and vibrant economy	objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Project would bring new housing to the City of Clovis and the broader region, by establishing a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA), and by providing infrastructure that meets City standards and is integrated with existing and planned facilities and connections. Such infrastructure includes the improvements to the transportation network described herein. For example, as stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, the Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling, supporting the sustainability and vibrancy of the local economy.
Goal 5: A region embracing clean transportation, technology, and innovation	No Conflict. As stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, the Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling. Therefore, the Project would promote clean transportation, technology, and innovation.

SOURCE: FRESNO COG 2022 RTP/SCS

CITY OF CLOVIS GENERAL PLAN

The City's General Plan includes the overarching goal of a comprehensive and well-maintained multimodal circulation system that provides for the safe and efficient movement of people and goods. For example, Goal 1 of the Circulation Element is to develop a context-sensitive and "complete streets" transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs. The Project would create a multimodal circulation system, including via road, bicycle, and pedestrian pathways, that would provide for a safe and efficient connection to the surrounding transportation network, consistent with a "complete streets" approach to development. In addition, the proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south. These park and trail connections would improve the quality of life for nearby residents.

Separately, the Air Quality Element of the City's General Plan calls for improved air quality through effective land use and transportation planning, regional cooperation, and a reduction in emissions. For example, Goal 1 of the Air Quality Element directs the City to develop a local environment that is protected for air pollution and emissions; Policy 1.1 (Land Use and transportation) calls for the City to reduce GHG emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems. Furthermore, Policy 3.5 (Energy and water

conservation) of the Open Space and Conservation Element encourages new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code. In line with this overarching goal and these policies, the Project would be required to comply with the applicable requirements of the CALGreen Code and California Energy Code, the City's Green Building Standards Code, and the City's Energy Code. The Project would be constructed in compliance with the 2022 Title 24 (CALGreen and Energy Code) standards and would be located within walking and biking distance to nearby transit options. In addition, the Project would include a variety of park and open space, which would connect to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south, which would contribute to vehicle trip reductions. Therefore, the Project would be consistent with the applicable goals, objectives, and policies in the City's General Plan.

CONCLUSION

In summary, the Project, including the off-site improvements, would be consistent with the plans, policies, regulations, and GHG emissions reduction actions/strategies outlined in the 2022 Scoping Plan Update, the Fresno COG's 2022 RTP/SCS, and the Clovis General Plan. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-related impacts related to GHG emissions would be **less than significant** relative to this topic.

Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources. (Less than Significant)

The CEQA Guidelines requires consideration of the potentially significant energy implications of a Project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed Project would be considered "wasteful, inefficient, and unnecessary" if it were to violate State and federal energy standards and/or result in significant adverse impacts related to Project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The amount of energy used by the proposed Project during operation would directly correlate primarily with the amount of energy used by Project buildings and outdoor lighting, and the generation of vehicle trips associated with the proposed Project. Other Project energy uses include fuel used by vehicle trips generated during Project construction and operation, fuel used by off-road construction vehicles during construction activities, and fuel used by Project maintenance activities during Project operation. The following discussion provides a detailed calculation of energy usage expected for the proposed Project, as provided by applicable modelling software (i.e. CalEEMod and

the CARB EMFAC2021). Additional assumptions and calculations are provided within Appendix C of this EIR.

ELECTRICITY

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

ON-ROAD VEHICLES (OPERATION)

The proposed Project would generate vehicle trips during its operational phase. A description of Project operational on-road mobile energy usage is provided below.

According to the Transportation Impact Assessment prepared for the proposed Project (LSA, 2023), and as described in more detail in Section 3.13: Transportation and Circulation of this EIR, the Project would increase automobile VMT by approximately 5,705 new daily trips. In order to calculate operational on-road vehicle energy usage and emissions, De Novo Planning Group used fleet mix data from the CalEEMod output for the proposed Project, Year 2028 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2021, weighted average MPG factors for gasoline and diesel were derived. Therefore, upon full buildout, the proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

ON-ROAD VEHICLES (CONSTRUCTION)

The proposed Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors travelling to and from the Project site). De Novo Planning Group estimated the vehicle fuel consumed during these trips based the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2023 gasoline and diesel MPG factors provided by EMFAC2021 (year 2023 factors were used to represent a conservative analysis, as the energy efficiency of construction activities is anticipated to improve over time). For the sake of simplicity, it was assumed that all construction worker light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel. Table 3.7-4, below, describes gasoline and diesel fuel consumed during each construction phase (in aggregate). As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed Project would occur during the building construction phase. There is no feasible mitigation available that would reduce on-road mobile vehicle GHG emissions generated by the Project construction activities (requiring the use of electric construction vehicles was deemed infeasible, given price and availability concerns). See Appendix C of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

TABLE 3.7-4: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

CONSTRUCTION PHASE	*# OF DAYS*	*TOTAL DAILY WORKER TRIPS(A)*	*TOTAL DAILY VENDOR TRIPS(A)*	*TOTAL HAULER WORKER TRIPS(A)*	*TOTAL GALLONS OF GASOLINE FUEL(B)*	*TOTAL GALLONS OF DIESEL FUEL(B)*
Site Preparation	60	18	0	0	**443**	**0**
Grading	155	20	0	0	**1,272**	**0**
Building Construction	960	297	96	0	**5,852**	**6,185**
Paving	110	15	0	0	**677**	**0**
Architectural Coatings	110	59	0	0	**133**	**0**
Total	**N/A**	**N/A**	**N/A**	**N/A**	**8,940**	**6,648**

NOTE: (A) PROVIDED BY CALEEMOD OUTPUT. (B)SEE APPENDIX C OF THIS EIR FOR FURTHER DETAIL

SOURCE: CALEEMOD; EMFAC2021.

OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the proposed Project includes: forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO_2 emissions expected to be generated by the proposed Project (as provided by the CalEEMod output), and standard conversion factors (as provided by the U.S. Energy Information Administration), the proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles. Detailed calculations are provided in Appendix C of this EIR.

CONCLUSION

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a **less than significant** impact.

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Project site and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Project is built and operated in the future. Information in this section is derived primarily from:

- *Phase I Environmental Site Assessment, Tract No. 6205 Property, Northeast corner of N. Sunnyside and E. Shepherd Avenues, Clovis, California 93619* (Krazan & Associates, Inc., 2019) (see Appendix G);
- *2014 Clovis General Plan* (City of Clovis, 2014);
- *2014 Clovis General Plan Draft Program Environmental Impact Report* (City of Clovis, 2014);
- *2000 Fresno County General Plan* (City of Clovis, 2000);
- *2018 Fresno County Zoning Ordinance* (City of Clovis, 2018);
- *City of Clovis Municipal Code, Title 9 – Development Code* (City of Clovis, 2022).

There were two comments received during the Notice of Preparation (NOP) comment period regarding hazards and hazardous materials from the California Department of Toxic Substances Control (DTSC) (May 18, 2022) and the County of Fresno Department of Public Works and Planning (June 2, 2022). All comments are included in Appendix A.

3.8.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

Project Location

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

Existing Site Uses

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs). The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood

branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Existing Surrounding Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

Site Topography

The Project site is relatively flat and is approximately 385 feet above mean sea level.

HAZARDS ASSESSMENT

For the purposes of this EIR, "hazardous material" is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment, if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are a number of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as Mecoprop [MCPP], Dinoseb, chlordane, dichloro-diphenyltrichloroethane [DDT], and dichloro-diphenyl-dichloroethylene [DDE]), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

Site Reconnaissance

As part of the Phase I Environmental Site Assessment (ESA) that was completed for the Project site (Krazan & Associates, Inc., 2019), a site reconnaissance, which included a visual observation of the Development Area and surrounding properties, was conducted by Ms. Michelle Phillips, Krazan's Environmental Assessor, on January 10, 2019. The objective of the site reconnaissance is to obtain

information indicating the likelihood of identifying recognized environmental conditions, including hazardous substances and petroleum products, in connection with the property (including soils, surface waters, and groundwater). A discussion of visual observations is provided below. Refer to the Site Observations Map (Figure 3.8-1) for the locations of items discussed below.

- A rural residential dwelling[1] with the associated Development Area address of 5230 East Shepherd Avenue was observed within the southern portion of the Development Area. A domestic water well was observed adjacent to the west of the rural residential dwelling (See Photographs No. 11 – 17 in Appendix F).
- Adjacent to the north of the rural residential dwelling was a large warehouse[2] where pecans are dried, packed and shipped. The warehouse was observed to be a steel structure set upon a slab on grade foundation. Large cracks were observed in the concrete foundation. De minimis staining was also observed on the foundation. Inside the warehouse were observed multiple pallets of stacked and bagged product, a forklift, several empty pallets, at least three refrigerators, and a ladder. A small storage room and two restrooms were also observed in the warehouse. The storage room was observed to contain a generator, at least three boxes of Roundup® herbicide, and multiple bags of zinc sulfate fertilizer. A small shop area was observed in the northeastern portion of the warehouse and contained multiple various tools and two compressed gas cylinders. The type of gas contained was no longer legible on the cylinders (See Photographs No. 18 – 21, 29 in Appendix G).
- The warehouse had a bay attached to the eastern side and observed within the bay were a large electric heater for drying pecans, a concrete-lined subsurface pit that is used to dry the pecans, and at least eight metal access panels for the pit. No evidence of petroleum products was observed within or near the pit. De minimis staining was observed on the motor of the electric heater (See Photographs No. 26 – 28 in Appendix G).
- Adjacent to the north of the warehouse and lined against its back wall were observed three approximately 250-gallon aboveground storage (AST) tanks. Two ASTs contained diesel fuel and the third contained gasoline. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs exhibited any petroleum product staining because the ground remained saturated with rainwater precluding visual observations (See Photographs No. 22 – 25 in Appendix G). A propane tank and stack of firewood were observed adjacent to the north of the ASTs (See Photograph No. 31 in Appendix G).
- Four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs. The drums exhibited de minimis staining. Also observed adjacent to the drums were two trash bins, a shopping cart and a tire (See Photograph No. 30 in Appendix G).
- At least seven utility vaults were observed to be located on the southern boundary along E. Shepherd Avenue (See Photograph No. 11, 52 in Appendix G).
- Four pole-mounted transformers were observed on the Development Area. Two of the pole-mounted transformers were observed to be located in the central-eastern portion of the

[1] Note – this dwelling was removed in 2020.

[2] Note – this warehouse was removed in 2020.

Development Area, and two were observed to be located along the eastern boundary on the southern portion of the Development Area. The transformer casings displayed no visual evidence of leakage and the ground surface below the transformers displayed no evidence of discoloration. Based on Krazan's observations, the Pacific Gas & Electric (PG&E) Company is the owner of the transformers. The transformers were not labeled as to their polychlorinated biphenyl (PCB) status. Based on the visual absence of apparent unauthorized releases of insulating fluids from the transformers at the time of Krazan's site reconnaissance, the transformers are not currently anticipated to pose an adverse impact to the Development Area (See Photographs No. 9, 38, 40, 58 in Appendix G).

- A small residential structure[3] was observed to be located in the central-eastern portion of the Development Area. Access was not granted to the structure at the time of the site reconnaissance because a trailer was parked up against the building, blocking the only entrance to the structure. Additionally, the three windows observed were all too frosted to allow observation of the interior. Multiple items were stored around the structure (See Photographs No. 34 – 37 in Appendix G):
    - On the western side was stored an old satellite dish, a pile of concrete debris, a flatbed trailer, and farming equipment;
    - On the southern side was stored a pile of railroad ties, old chain-link fencing, a ladder and farming equipment; and,
    - On the eastern side was stored two trailers, multiple bales of chain link fencing, several stacks of tires and a portable water tank on a trailer.
- Five agricultural water wells were observed to be located on the Development Area, two located along the east-west centerline of the Development Area to the east of the small residential structure previously mentioned, one located in the southwestern corner of the Development Area, one located in the northwestern corner of the Development Area, and one located along the eastern boundary of the Development Area (See Photographs No. 6, 33 – 34, 37 – 39, 41, and 53 in Appendix G).
- A rural residential dwelling[4] was observed within the northwestern portion of the Development Area. A domestic water well and associated water tank was observed adjacent to the west of the rural residential dwelling (See Photographs No. 6 – 7, 42 – 49 in Appendix G).
- Two large berms containing wood branches and debris from pruning the orchard were observed along the eastern boundary of the Development Area. The berms were at least 10 to 12 feet tall. The larger of the two berms was approximately 550 feet in length, and the smaller was approximately 80 feet in length. The smaller of the two berms appears to be mainly chopped wood. It is unknown how long the berms have been there and what the condition of the ground is below the berms. Additionally, three flatbed trailers were observed to be located adjacent to the smaller berm (See Photographs No. 50 – 51, 54 – 57 in Appendix G).

[3] Note – this residential structure was removed in 2020.

[4] Note – this residential structure was removed in 2020.

- During the visual observations of the Development Area, no hazardous materials were observed. Exposed surface soils did not exhibit obvious signs of discoloration in accessible areas. No obvious evidence (vent pipes, fill pipes, dispensers, etc.) of USTs was noted within the areas observed. No standing water or major depressions were observed on the Development Area. No indications of former structures, such as foundations, were observed on the Development Area.
- No high-voltage, tower-mounted electrical transmission lines were observed on or in the vicinity of the Development Area.

Site Usage Survey

A review of a previous environmental assessment, historical aerial photographs, a USGS topographic quadrangle map, City of Clovis Planning and Development Department (CCPDD) and Fresno County Public Works and Development Department (FCPWDD) records, reasonably ascertainable City directories, a search for historical fire insurance maps (HFIMs), and a Phase I ESA interview were utilized to assess the history of the Development Area.

AERIAL PHOTOGRAPH INTERPRETATION

Historical aerial photographs dated 1937, 1946, 1950, 1957, 1962, 1967, 1973, 1979, 1984, 1987, 1998, 2005, 2009, 2012, and 2016 were reviewed to assess the history of the Development Area. These photographs were obtained from Environmental Data Resources, Inc. (EDR). As shown in the historical aerial photographs, the Development Area has been used for agricultural and residential uses since at least 1979. A discussion of the aerial photograph interpretation is provided below.

- 1979: The Development Area appears to be utilized for agricultural purposes. A small residential structure has been developed in the southwestern corner of the northeastern portion of the Development Area. One out-structure on the Development Area has been removed and replaced with a barn approximately twice as large as the previous structure. At least 15 rural residential dwellings have been developed on the eastern adjacent property to the Development Area. At least eight rural residential dwellings have been developed in the vicinity to the south, seven rural residential dwellings have been developed in the vicinity to the north and seven rural residential dwellings have been developed in the vicinity to the northeast of the Development Area.
- 1984: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1979 aerial photograph, except that five rural residential dwellings have been developed and at least 10 plots have been cleared for residential development on the adjacent properties to the north and west of the Development Area. Additionally, a new paved road has been developed to access the newly developed residences.
- 1987: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1984 aerial photograph, except that a rural residential dwelling has been developed in the northwestern corner of the northeastern portion of the Development Area. The adjacent property to the west and vicinity properties to the west

and northwest appear to be fallow land. Several additional structures have been developed on the rural residential properties adjacent to the east of the Development Area.

- 1998: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1987 aerial photograph, except that 10 rural residential dwellings have been developed on the adjacent properties to the north and west of the Development Area. One rural residential dwelling has been developed on a vicinity property to the north of the Development Area. The adjacent property to the west and vicinity properties to the west and northwest appear to have been recently cultivated.
- 2005: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1998 aerial photograph, except that the adjacent property to the west and vicinity properties to the west and northwest appear to be utilized for agricultural purposes. Residential tract housing has been developed in the vicinity to the southwest of the Development Area.
- 2009: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 2005 aerial photograph, except that additional residential tract housing has been developed on the southeastern adjacent property and in the vicinity to the southwest of the Development Area. A large commercial structure has been developed in the vicinity to the southeast of the Development Area.
- 2012: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 2009 aerial photograph.
- 2016: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 2012 aerial photograph, except that Dry Creek Trailhead has been developed on a southwestern vicinity property, on the southwest corner of N. Sunnyside and E. Shepherd Avenues. A PG&E Substation has been developed in the vicinity to the west of the Development Area.

USGS TOPOGRAPHIC QUADRANGLE MAP

Krazan's review of the USGS, 7.5 minute, Clovis California topographic quadrangle map dated 1964, photo revised 1981, indicates that two residential structures and a water well are depicted on the Development Area.

CCPDD AND FCPWDD

On January 9, 2019, the CCPDD and FCPWDD were visited to review building permit records for the Development Area APNs of 557-021-19, -20 and -21, and the historical address of 5230 E. Shepherd Avenue. No building permit records are on file with the CCPDD or FCPWDD for the current APNs or historical Development Area addresses. Therefore, no permits for items such as underground storage tanks, demolition, or previous structures/features were revealed for the Development Area.

CITY DIRECTORIES

Krazan contracted with EDR to provide a review of available City directories for the Development Area historic address of 5230 East Shepherd Avenue utilizing approximately five-year intervals. According to the City directory, the owner of the site from 1996 to 2002 was CAL PECAN.

SANBORN FIRE INSURANCE MAPS

Krazan reviews Sanborn Fire Insurance Maps (SFIMs) to evaluate prior land use of the Development Area and the adjacent properties. SFIMs typically exist for cities with populations of 2,000 or more, the coverage dependent on the location of the Development Area within the City limits. Krazan contracted with EDR to provide copies of available SFIMs for the Development Area and the adjacent properties as far back as 1867. EDR's search of SFIMs revealed no coverage for the Development Area and the adjacent properties.

INTERVIEWS

Krazan attempted to conduct an interview with the current and past owners of the Development Area. The interviews are designed to provide pertinent information regarding potential environmental impacts associated with the Development Area.

Development Area Owner: A completed owner questionnaire was not received from nor was an interview conducted with the property owner. The absence of a completed owner interview/questionnaire represents a data gap.

Previous Development Area Owners/Occupants: An interview with a previous owner/occupant of the Development Area was not reasonably ascertainable. Consequently, the absence of information regarding the history and historical uses of the Development Area obtained from an interview of the previous owner and/or occupant constitutes a data gap.

Regulatory Agency Records

A review of regulatory agency records was conducted to help determine if hazardous materials have been handled, stored, or generated on the Development Area and/or the adjacent properties and businesses. Regulatory records are reviewed based on the following criteria:

1) properties with known soils and/or groundwater releases considered to represent the potential for impact to the Development Area that are located within 1,760 feet of the Development Area for constituents of concern impacts or 528 feet of the Development Area for petroleum hydrocarbon impacts;
2) properties that are adjacent or in proximity to the Development Area included within the EDR regulatory database report or noted during the site reconnaissance to possibly handle, store, or generate hazardous materials.

FRESNO COUNTY DEPARTMENT OF COMMUNITY HEALTH, ENVIRONMENTAL HEALTH SYSTEM

The Fresno County Department of Community Health, Environmental Health System (FCEHS) is the lead regulatory agency, or Certified Unified Program Agency (CUPA), for hazardous materials handling facilities in Fresno County. The review of the FCEHS CUPA and Solid Waste Programs Resource List (CUPA List) dated January 7, 2019, indicated that no records are on file with the FCEHS for the Development Area. However, records are on file with the FCEHS for adjacent and vicinity properties which do not represent material evidence of the potential to represent environmental concern to the Development Area.

CITY OF CLOVIS FIRE DEPARTMENT

The City of Clovis Fire Department (CCFD) has jurisdiction for the fire protection for the Development Area and the immediate vicinity. According to representatives of the CCFD, records of hazardous materials incidents are kept by the FCEHS. Additionally, hazardous/flammable incidents are filed according to the date of occurrence and by the location of occurrence with the FCEHS.

STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – GEOTRACKER

The review of the State of California Regional Water Quality Control Board (RWQCB) Geotracker database available via the RWQCB Internet Website indicated that no sites including leaking underground storage tank (LUST) sites, cleanup program sites, land disposal sites, or military sites are listed for the Development Area, the adjacent properties, or properties located within the Development Area vicinity. Additionally, no permitted underground storage tank (UST) sites were determined to be located on or adjacent to the Development Area.

STATE OF CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL – ENVIROSTOR

The review of the State of California Department of Toxic Substances Control (DTSC) Envirostor database available via the DTSC's Internet Website indicated that no sites including State response sites, voluntary cleanup sites, school cleanup sites, or military or school evaluation sites are listed for the Development Area, the adjacent properties, or properties located within 1,000 feet of the Development Area. Additionally, no Federal Superfund – National Priorities List (NPL) sites were determined to be located within a one-mile radius of the Development Area.

CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES - DOMS

The review of the State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) Online Mapping System indicated that no plugged and abandoned or producing oil wells are located on or adjacent to the Development Area.

LOCAL AREA TRIBAL RECORDS

No Indian reservations, USTs on Indian land, or LUSTs on Indian land were reported on the Development Area, adjacent properties, or vicinity properties in the EDR-provided government database report.

REGULATORY AGENCY LISTS REVIEW

Several agencies have published documents that list businesses or properties, which have handled hazardous materials or waste or may have experienced site contamination. The lists consulted in the course of our assessment were compiled by EDR and represent reasonably ascertainable current listings. The locations and distances of every property listed by EDR were not verified as part of the Phase I ESA. As part of the Phase I ESA, the location and distances of the properties Krazan deemed as having the potential to adversely impact the Development Area were verified. The actual location

of the listed properties may differ from the EDR listing. The actual distances of the listed properties are based on observations during the site reconnaissance completed as part of the Phase I ESA. No EDR-listed unmapped (non-geocoded) sites were determined to be located on or adjacent to the Development Area. Please refer to Appendix D of Appendix G in the Table of Contents for a copy of the EDR Radius Map Report.

There were no listings for the Development Area or adjacent properties.

The following property was listed in the vicinity of the Development Area:

- **P-R Farms, Inc.** (located approximately 158 to 173 feet to the southwest 4648-4650 East Shepherd Avenue): According to EDR, this facility is listed a CUPA Listings, Statewide Environmental Evaluation and Planning System (SWEEPS) UST, California Facility Inventory Database (FID) UST, and HIST UST site including a 500-gallon gasoline tank and a 2,000-gallon diesel tank on a farm property installed in at least 1985. No records for releases or removal were found on file with the FCEHS, RWQCB or DTSC. Based on the review of available regulatory records and its hydraulically cross-gradient location from the Development Area, there is no evidence to suggest that this facility represents an environmental concern in connection with the Development Area.

The remaining properties within the specified search radius of the Development Area, which appeared on local, state, or federally published lists of sites that use or have had releases of hazardous materials or petroleum products are of sufficient distance and/or situated hydraulically cross- or downgradient from the Development Area, such that impact to the Development Area via groundwater migration is unlikely. In general, potentially hazardous materials released from facilities located approximately hydraulically upgradient within the Development Area vicinity, or in a hydraulically cross-gradient direction in proximity to the site, may have a reasonable potential of migrating to the Development Area via groundwater flow. This opinion is based on the assumption that non-vaporous hazardous materials generally do not migrate large distances laterally within the soil, but rather tend to migrate with groundwater in the general direction of groundwater flow. However, the potential for migration of volatile hazardous materials may include movement within soils, groundwater flow or potentially omni-directionally if present in a vaporous state.

HAZARDOUS MATERIALS MIGRATION IN VAPOR

Hazardous materials or petroleum product vapors which may have the potential to migrate into the subsurface of the Development Area may be caused by the release of vapors from contaminated soil or groundwater either on or in the vicinity of the Development Area from current or historical uses of the Development Area and/or adjacent or vicinity properties. Current or past land uses such as gasoline stations (using petroleum hydrocarbons), dry cleaning establishments (using chlorinated volatile organic compounds), former manufactured gas plant sites (using volatile and semi-volatile organic compounds), and former industrial sites, such as those that had vapor degreasing or other parts-cleaning operations (using chlorinated volatile organic compounds) are of particular concern. Constituent of concern vapors are capable of migrating great distances omni-directionally along

subsurface conduits such as pipelines, utility lines, sewer and stormwater lines, and building foundations.

Based on the observations and review of the EDR regulatory database report included in the Phase I ESA, no listings of concern were determined to be associated with the Development Area, adjacent properties, or properties located within the Development Area vicinity. The screening process for vapor migration in connection with the Development Area is described in the ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, an industry consensus methodology to assess vapor migration, which is not included in the scope of work of the Phase I ESA.

No engineering control sites, sites with institutional controls, or sites with deed restrictions were listed for the Development Area, adjacent sites or vicinity properties in the EDR Report.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City of Clovis Planning Area is subject to various federal, State, and local regulations. The following provisions are included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous related materials.

- The Highway Patrol designates the routes in California which are to be used for the transportation of explosives. (Section 31616)
- The CVC applies when the explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (Section 31601(a))
- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (Section 31602(b) and Section 32104(a))
- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (Section 31614(a))

Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The Highway Patrol designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (Section 32100 and Section 32102(b))

FIRE HAZARDS

Wild fires are a major hazard in the State of California. Wild fires burn natural vegetation on developed and undeveloped lands and include timber, brush, woodland, and grass fires. While low intensity wild fires have a role in the County's ecosystem, wild fires put human health and safety, structures (e.g., homes, schools, businesses, etc.), air quality, recreation areas, water quality, wildlife habitat and ecosystem health, and forest resources at risk.

Wildland fire hazards exist in varying degrees in the foothill portion of the County located to the east and southwest of the Project site. In addition, the existing dead pecan orchard poses a potential fire hazard and as a precaution tree removal is in process, as well as the number of existing structures without sprinkler systems, are potential fire hazards. Nevertheless, the Project site is located in the valley floor, which is predominantly under agricultural or urban use, which is typically considered an area with a low fire hazard risk.

Fire Hazard Severity Zones

The State has charged the California Department of Forestry and Fire Protection (CalFire) with the identification of Fire Hazard Severity Zones (FHSZ) within State Responsibility Areas. In addition, CalFire must recommend Very High Fire Hazard Severity Zones (VHFHSZ) identified within any Local Responsibility Areas. The FHSZ maps are used by the State Fire Marshall as a basis for the adoption of applicable building code standards.

LOCAL RESPONSIBILITY AREAS

The Project site is located within a Local Responsibility Area (LRA). The Project site is not categorized as a "Very High" FHSZ by CalFire.

STATE RESPONSIBILITY AREAS

There are no State Responsibility Areas (SRAs) within the vicinity of the Project site.

FEDERAL RESPONSIBILITY AREAS

There are no Federal Responsibility Areas (FRAs) within the vicinity of the Project site.

3.8.2 REGULATORY SETTING

FEDERAL

Aviation Act of 1958

The Federal Aviation Act resulted in the creation of the Federal Aviation Administration (FAA). The FAA is charged with the creation and maintenance of a National Airspace System.

Federal Aviation Regulations (CFR, Title 14)

The Federal Aviation Regulation (FAR) establishes regulations related to aircraft, aeronautics, and inspection and permitting.

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor vehicle emissions standards, stationary source

emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

Clean Water Act

The Clean Water Act (CWA), which amended the Water Pollution Control Act (WPCA) of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into Waters of the U.S. and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into Waters of the U.S. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of Federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active Federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous material releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Environmental Protection Agency

The primary regulator of hazards and hazardous materials is the EPA, whose mission is to protect human health and the environment. The City of Clovis is located within EPA Region 9, which includes Arizona, California, Hawaii, and New Mexico.

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of "Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire" by the U.S. Departments of the Interior and Agriculture.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases, as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program established tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. The RCRA was further amended in 1988 to set additional standards for USTs.

In July 2015, the EPA revised the federal UST regulation, which strengthened the 1988 federal UST regulations by increasing emphasis on properly operating and maintaining UST equipment. The revision added new operation and maintenance requirements and addressed UST systems deferred in the 1988 UST regulation. The purpose of the revision was to help prevent and detect UST releases, which are a leading source of groundwater contamination. To ensure compliance performance measures reflect the 2015 UST regulation, the Environmental Protection Agency (EPA) and the Association of State and Territorial Solid Waste Management Officials coordinated to update existing compliance performance measures and add new measures. The measures required states to switch from tracking compliance against significant operational compliance measures to the more stringent technical compliance rate (TCR) measures. As of June 2020, only 45.6 percent of USTs were in compliance with all TCR categories[5].

[5] EPA. *Semiannual Report of UST Performance Measures Mid Fiscal Year 2020*. June 2020. Access: https://www.epa.gov/sites/production/files/2020-06/documents/ca-20-12.pdf

STATE

Aeronautics Act (Public Utilities Code §21001)

The Caltrans Division of Aeronautics bases the majority of its aviation policies on the Aeronautics Act. Policies include permits and annual inspections for public airports and hospital heliports and recommendations for schools proposed within two miles of airport runways.

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (Pub. Util. Code §21670). Furthermore, each ALUC must prepare an ALUCP. Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

Assembly Bill 337

Per AB 337, local fire prevention authorities and CalFire are required to identify Very High Fire Hazard Severity Zones (VHFHSZ) in LRAs. Standards related to brush clearance and the use of fire-resistant materials in fire hazard severity zones are also established.

California Code of Regulations

Title 3 of the California Code of Regulations (CCR) pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application equipment, the weather, the treated lands and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application;
- Damage non-target crops or animals or any other public or private property; and
- Contaminate public or private property or create health hazards on said property.

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal.

Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport, and disposal of hazardous waste.

Title 26 of the CCR is a medley of State regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging, and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment, and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation, and maintenance of the state's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special, and hazardous).

California Government Code Section 65302

This section, which establishes standards for developing and updating General Plans, includes fire hazard assessment and Safety Element content requirements.

California Health and Safety Code

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

Division 12 establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and postsecondary buildings.

Division 20 establishes DTSC authority and sets forth hazardous waste and underground storage tank regulations. In addition, the division creates a State superfund framework that mirrors the Federal program.

Division 26 establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per Federal regulations and charges the Board with meeting Clean Air Act requirements.

California Health and Safety Code and Uniform Building Code Section 13000 et seq.

State fire regulations are set forth in §13000 *et seq*. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the Uniform Building Code and mandate the abatement of fire hazards.

The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Vehicle Code §31600 (Transportation of Explosives)

This code establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

California Public Resources Code

The State's Fire Safety Regulations are set forth in Public Resources Code §4290, which include the establishment of SRAs.

Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone who "*…owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material"* (§4291(a)).

Food and Agriculture Code

Division 6 of the California Food and Agriculture Code (FAC) establishes pesticide application regulations. The division establishes training standards for pilots conducting aerial applications, as well as permitting and certification requirements.

State Oversight of Hazards and Hazardous Materials

The DTSC is chiefly responsible for regulating the handling, use, and disposal of toxic materials. The State Water Resources Control Board (SWRCB) regulates discharge of potentially hazardous materials to waterways and aquifers and administers the basin plans for groundwater resources in the various regions of the state. The RWQCB oversees surface and groundwater. Programs intended to protect workers from exposure to hazardous materials and from accidental upset are covered under OSHA at the Federal and California Division of Occupational Safety and Health (Cal/OSHA) and the California Department of Health Services (DHS) at the state level. Air quality is regulated through the CARB and San Joaquin Valley Air Pollution Control District. The State Fire Marshal is responsible for the protection of life and property through the development and application of fire prevention engineering, education, and enforcement; CalFire provides fire protection services for State and privately-owned wildlands.

Water Code

Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Water Quality Control Act, created the SWRCB and the RWQCB. In addition, water quality responsibilities are established for the SWRCB and RWQCBs.

LOCAL

City of Clovis General Plan

POLICIES: ENVIRONMENTAL SAFETY ELEMENT

- Policy 1.4 Facilities that use hazardous materials. Prohibit facilities using, storing, or otherwise involved with hazardous or toxic materials to be located in the 100-year flood zone, unless all standards of elevation, flood proofing and storage have been implemented.
- Policy 2.1 Safe storage and maintenance. The use and storage of hazardous materials shall comply with applicable federal, state, and local laws to prevent and mitigate hazardous materials releases.
- Policy 2.2 Mitigation and remediation of groundwater contamination. Actively participate in local and regional efforts directed at mitigating environmental exposure to and cleaning up contaminated groundwater.
- Policy 2.3 Truck routes for hazardous materials. Maintain designated truck routes for the transportation of hazardous materials through the City. Discourage routes that pass through residential neighborhoods to the maximum extent feasible.
- Policy 2.4 Hazardous materials response team. Maintain a Type 1 hazardous materials response team serving the City of Clovis.
- Policy 2.5 Safer Alternatives. Minimize the use of hazardous materials by encouraging the selection of non-toxic alternatives that do not pose a threat to the environment.
- Policy 2.6 Community education. Provide educational resources to residents and businesses to promote safe practices related to the use, storage, transportation, and disposal of hazardous materials.
- Policy 3.11 Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.

POLICIES: PUBLIC FACILITIES ELEMENT

- Policy 6.8 Emergency preparedness planning. Maintain an emergency operations plan, an emergency operations center, and a hazard mitigation plan to prepare for actual or threatened conditions of disaster or extreme peril.

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. The FCEHS is the CUPA designated for Fresno County. The FCEHS is responsible for the implementation of statewide programs within its jurisdiction, including Underground storage of hazardous substances (USTs), Hazardous Materials Business Plan (HMP) requirements, California Accidental Release Prevention (Cal-ARP) program, etc. Implementation of these programs involves permitting, inspecting, providing education/guidance, investigations, and enforcement.

San Joaquin Valley Air Pollution Control District

San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Clovis and deals with pollutants that get into the air from stationary (including fumes, dust and smoke, some asbestos) and mobile sources. SJVAPCD's mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality management strategies. SJVAPCD responds to complaints about smells, answers questions about air quality management permits, and reviews development projects for compliance with air quality and greenhouse gas significance thresholds. The SJVAPCD and air quality are addressed in detail in Section 3.3, Air Quality, of this EIR.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- 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 for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) are presented:

- Adjacent to the north of the on-site warehouse[6] and lined against its back wall, three approximately 250-gallon aboveground storage (AST) tanks were observed. Two ASTs contained diesel fuel and the third contained gasoline. Additionally, four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs, which exhibited minimis staining. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs and/or drums exhibited any significant petroleum product staining because the ground remained saturated with rainwater precluding visual observations. Consequently, the specific condition of the ground surface underlying the ASTs and drums is unknown. The ASTs and drums are shown in Figure 3.8-1.
- The review of aerial photographs indicates that the Development Area was utilized for agricultural purposes from at least 1937 to the present and that residential structures and associated outbuildings occupied the property from at least 1937, 1979 and 1987 to the present. No records of USTs for the Development Area are on file with the local regulatory agencies; however, USTs on rural or agricultural properties historically have been exempt from requirements for registration with regulatory agencies. Furthermore, Kazan's (the Phase I ESA author) experience with such properties has shown that it was not uncommon for property owners/operators to install USTs for their convenience, especially in the vicinity of structures, which are undocumented and whose presence would remain unknown in spite of the standard data research conducted in the course of this Phase I ESA. It is therefore possible that subsurface features such as unregistered fuel USTs may exist within the structure-related portions of the Development Area, which remain unknown based on the absence of any regulatory, municipality, and/or interview data, or other evidence indicating their presence or location. Consequently, despite an absence of data suggesting their

[6] Note – this warehouse was removed in 2020.

presence, the presence or absence of USTs associated with on-site structures in a historical agricultural setting on the Development Area is unknown.

The following non-scope issues and site development issues are presented:

- A review of historical aerial photographs indicates the Development Area was utilized for agricultural purposes from at least 1937 to present. It is not known if environmentally persistent pesticides and/or herbicides were historically applied to the crops grown on the Development Area. Although the potential exists that environmentally persistent pesticides/herbicides were historically applied to the crops grown on the Development Area, 1) no material evidence of the use of environmentally persistent pesticides/herbicides was obtained during the course of this assessment, 2) Krazan's sampling analysis of surface soils from properties with similar agricultural histories in the Development Area has typically yielded nondetectable results or very low concentrations for analysis of environmentally persistent pesticides/herbicides, and 3) based upon the soil disturbance in conjunction with the grading and trenching activities during the proposed redevelopment of the Development Area, it is likely that potential agricultural chemicals would be significantly mixed and diluted. Consequently, given the above referenced factors and Krazan's experience in the Development Area vicinity, which generally indicates that the potential is low for elevated concentrations of environmentally persistent pesticides/herbicides related to agricultural cultivation to exist in the near-surface soils of common agricultural ground at concentrations which would require regulatory action, despite the absence of specific data, the potential for elevated concentrations of environmentally persistent pesticides/herbicides to currently exist in the near-surface soils of the Development Area at concentrations, which would require regulatory action appears to be low.
- Four pole-mounted transformers were observed on the Development Area. Two of the pole-mounted transformers were observed to be located in the central-eastern portion of the Development Area, and two were observed to be located along the eastern boundary on the southern portion of the Development Area. The transformer casings displayed no visual evidence of leakage and the ground surface below the transformers displayed no evidence of discoloration. Based on site observations made, the Pacific Gas & Electric (PG&E) Company is the owner of the transformers. The transformers were not labeled as to their polychlorinated biphenyl (PCB) status. Based on the visual absence of apparent unauthorized releases of insulating fluids from the transformers at the time of the site reconnaissance, the transformers are not currently anticipated to pose an adverse impact to the Development Area. However, in the event of a future release/leak of insulating fluids from the transformers, PG&E should be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement (See Photographs No. 9, 38, 40, 58 in Appendix G). The pole-mounted transformers are shown in Figure 3.8-1.
- Based on historical research and interviews, two domestic water wells and five agricultural water wells were observed to be associated with the Development Area. If the on-site water wells are not to be used in the future, they should be properly abandoned/destroyed in accordance with state and local guidelines. The wells are shown in Figure 3.8-1.

Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Mitigation Measure 3.8-1 was developed to ensure that a well abandonment permit is obtained from Fresno County Department of Public Health Environmental Health Division, and that all on-site wells are properly abandoned. Mitigation Measure 3.8-2 was developed to ensure that additional testing is performed prior to the issuance of grading permits for construction activities in several areas that have been deemed to have potentially hazardous conditions present. The additional

testing will investigate whether any of these areas contain hazardous materials that need special treatments. Mitigation Measure 3.8-2 also specifies that all construction or demolition activities comply with Cal/OSHA asbestos and lead worker construction standards, and offsite disposal requirements. This measure also provides specifications for additional soil sampling in stained areas prior to soil disturbance activities. Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that potential impacts are reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.8-1*: Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.*

Mitigation Measure 3.8-2: *The Project proponent shall hire a qualified consultant to perform additional testing prior to the issuance of grading permits for construction activities in the following areas that have been deemed to have potentially hazardous conditions present:*

- *The area near the three ASTs and four 55-gallon drums (see Figure 3.8-1 of the Draft EIR).*
- *The areas where USTs may exist, including near the former warehouse and former residences.*
- *The soils in the area where farming equipment and above ground tanks have been used, and near the former warehouse and former residences (see Figure 3.8-1 of the Draft EIR).*
- *The area near the four pole-mounted transformers (see Figure 3.8-1 of the Draft EIR).*

The intent of the additional testing is to investigate whether any of the areas, facilities, or soils contain hazardous materials. All activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The ACBM and lead shall be disposed of properly at an appropriate offsite disposal facility. If surface staining is found on the Project site, a hazardous waste specialist shall be engaged to further assess the stained area.

Should further soil sampling be required in any stained areas, evenly distributed soil samples shall be conducted for analysis of pesticides and heavy metals. The samples shall be submitted for laboratory analysis of pesticides and heavy metals per DTSC and EPA protocols. The results of the soil sampling shall be submitted to the Fresno County Department of Public Health Environmental Health Division. If elevated levels of pesticides or heavy metals are detected during the laboratory analysis of the soils, a soil cleanup and remediation plan shall be prepared and implemented prior to the commencement of grading activities.

Further, in the event of a future release/leak of insulating fluids from any of the four pole-mounted transformers, PG&E shall be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement.

OPERATIONAL PHASE IMPACTS

The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis.

The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department. Overall, the proposed Project would have a **less than significant** impact relative to this issue.

Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

The nearest school to the Project site is the Woods Elementary School, located approximately 0.66 miles southwest of the Project site. Other schools near the Project site include: Dry creek Elementary School (1.25 miles southeast), Century Elementary School (1.28 miles south), and Buchanan High School (1.29 miles southwest). There are a variety of other schools located beyond three miles from the Project site.

The proposed Project includes the development of up to 605 residential units. Household wastes generated from residential uses include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that typically do not pose a significant threat of emitting hazardous emissions or materials with proper disposal. Household Hazardous Waste (HHW) Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators. These HHW facilities are intended to provide a local facility for residents to easily dispose of household wastes, including those described above, so that they do not end up be illegally disposed of in places that could result in more serious pollution Therefore, there is not a higher risk of household hazardous materials being released within the Project site. Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Less than Significant)

The hazards assessment included a site reconnaissance, interviews, historical land use research, and database research. The assessment revealed no evidence of historical or existing Recognized Environmental Conditions in connection with the Project site. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore,

Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-4: The Project is not located within an airport land use plan, two miles of a public airport or public use airport, and would not result in a safety hazard for people residing or working in the project area (Less than Significant)

There are no documented public airports or public use airports within close proximity to the Project site. The nearest airport facility within the vicinity of the Project site is the Fresno Yosemite International Airport, located approximately six miles south. The Project site is not located within the airport influence area or within the Airport's noise exposure contours for the Fresno Yosemite International Airport as identified in the Airport Land Use Compatibility Plan (ALUCP). Therefore, Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

The Fresno County Master Emergency Services Plan serves as the Emergency Plan for Fresno County. This plan serves as a guide for response to an emergency/disaster in the unincorporated areas of the Fresno County Operational Area, and to coordinate and assist with the disaster response in jurisdictions both within and outside of the Fresno County Operational Area. In addition to the Fresno County Operational Area Master Emergency Services Plan, hazard specific response plans and standard operating procedures (SOP) have been developed or are in the process of development to supplement this master plan with disaster/emergency specific response procedures and information.

The County also prepared a Fresno County Multi-Jurisdictional Hazard Mitigation Plan. This plan underwent a comprehensive update in 2017-2018 building upon the plan that was originally developed in 2009. This plan demonstrates the community's commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources. This plan was also developed to make Fresno County and participating jurisdictions eligible for certain federal disaster assistance, specifically, the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program, and Flood Mitigation Assistance (FMA). This plan also meets the planning requirements of the National Flood Insurance Program's Community Rating System (CRS), in order to earn points under CRS Activity 510, which could lower flood insurance premiums in CRS communities.

In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Future uses on the Project site will have access to the County resources that establish protocols for safe use, handling and transport of hazardous materials. Construction activities are not expected to result in

any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency. Therefore, Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-6: Potential to expose people or structures to a risk of loss, injury or death from wildland fires. (Less than Significant)

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The County has areas with an abundance of flashy fuels (i.e. grassland) in the foothill areas of the County.

Wildfires are a potential hazard to development, including land uses located in the foothill and forested areas of the City. The severity of wildfire problems depends on a combination of vegetation, climate, slope, and people. The vegetation and topography found in the eastern portions of the City, coupled with hot, dry summers, present fire hazards during critical fire periods for much of the county. In addition to natural factors such as lightning, human activity is a primary factor contributing to the incidence of wildfires. Campfires, smoking, debris burning, arson, public utility infrastructure, and equipment use are common human-related causes of wildfires.

The Project site is not categorized as a “Very High” FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban.

The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire. The proposed Project would have a **less than significant** impact with regards to this environmental issue.

LEGEND

= SUBJECT SITE BOUNDARY
= AGRICULTURAL WATER WELL
= DOMESTIC WATER WELL
= POLE-MOUNTED TRANSFORMERS
= ASTS
= 55-GALLON DRUMS
= RESIDENTIAL DWELLING*
= WAREHOUSE*
= UTILITY VAULT

*Note: The two residences and warehouse were removed in 2020.

Sources: Krazan & Associates, Inc. Map date: November 9, 2022.

SHEPHERD NORTH PROJECT

Figure 3.8-1. Site Observations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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This section describes the regulatory setting, regional hydrology and water quality, impacts that are likely to result from project implementation, and measures to reduce potential impacts to water quality. This section is based in part on the following documents, reports and studies:

- *2014 Clovis General Plan* (Placeworks, 2014);
- *2014 Clovis General Plan Draft Program Environmental Impact Report* (Placeworks, 2014);
- *Fresno-Clovis Storm Water Quality* Management *Program* (Fresno Metropolitan Flood Control District, 2013);
- *California's Groundwater: Bulletin 118 - San Joaquin Valley Groundwater Basin/Kings Subbasin* (DWR 2006);
- *City of Clovis Urban* Water *Management Plan 2020 Update (Provost & Pritchard, 2021B)*

3.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

The San Joaquin Valley is surrounded on the west by the Coast Ranges, on the south by the San Emigdio and Tehachapi Mountains, on the east by the Sierra Nevada and on the north by the Sacramento-San Joaquin Delta and Sacramento Valley. The northern portion of the San Joaquin Valley drains toward the Delta by the San Joaquin River and its tributaries, the Fresno, Merced, Tuolumne, and Stanislaus Rivers. The southern portion of the valley is internally drained by the Kings, Kaweah, Tule, and Kern Rivers that flow into the Tulare drainage basin, including the beds of the former Tulare, Buena Vista, and Kern Lakes.

The San Joaquin and Kings Rivers are the two principal rivers within or bordering the Kings subbasin, where the City of Clovis is located. The Fresno Slough and James Bypass are along the western edge of the subbasin and connect the Kings River with the San Joaquin River. Average annual precipitation values range from seven to 10 inches, increasing eastward.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1. STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2012.

Hydrologic Region

The City of Clovis is located in the Tulare Lake Hydrological Region, which covers about 16,800 square miles and includes all of Kings and Tulare counties and most of Fresno and Kern counties (Department of Water Resources, 2015). The hydrologic region is bordered to the east by the Sierra Nevada, to the west by the Coast Ranges, and to the south by the Tehachapi Mountains. To the north, the Tulare Lake region is separated from the San Joaquin River Hydrologic Region (San Joaquin region) by a rise in the San Joaquin Valley floor caused by an accumulation of San Joaquin River and the Kings River alluvial fan deposits. Although this drainage divide is the boundary between the San Joaquin and Tulare Lake regions, geographically the valley floor portion of the Tulare Lake region is considered part of the southern San Joaquin Valley. Major rivers draining into the Tulare Lake region include the Kings, Kaweah, Tule, and Kern, which extend from the Sierra Nevada headwaters in eastern Fresno and Tulare counties, to their termination at the former Tulare Lake and Buena Vista Lake beds.

As shown in Figure 3.9-1, the Project site is located in the James Bypass watershed.

Groundwater

Clovis is underlain by the Kings Groundwater Subbasin. The Kings Subbasin is bounded on the north by the San Joaquin River, on the west by the Delta-Mendota and Westside Subbasins, the south by the Kings River South Fork and the Empire West Side Irrigation District, and on the east by the Sierra Nevada foothills.

LOCAL SETTING

The Project site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.

Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Drainage

Stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the Fresno Metropolitan Flood Control District (FMFCD). The FMFCD provides flood control and urban storm water services in a 399-square mile watershed located between the Kings and San Joaquin Rivers (FMFCD, 2022a). The Fresno/Clovis urban area is served by a system of roughly 700 miles of pipeline and more than 150 stormwater retention basins. FMFCD's stormwater drainage system discharges to irrigation canals, creeks, and the San Joaquin River (FMFCD, 2013). The system is designed to retain and infiltrate as much runoff as possible into the underlying groundwater aquifer. On average, FMFCD's regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer (FMFCD, 2020). The stormwater basins also remove 50-80 percent of the typical stormwater pollutants.

The District Master Plan storm drainage pipeline system is designed to accept the peak flow rate of runoff from a two-year intensity storm event (a storm that has a 50 percent probability of occurring in any given year) (FMFCD, 2022b). When storm events occur that exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. If the storm is of sufficient intensity to generate more water than the street can store, the water will continue

to rise until it reaches a topographic outlet where it can escape down gradient. This escape route is a feature of the major storm routing system, implemented in 1998, that protects properties from damage in rainfall or runoff events that exceed system design capacities. The Project site is located within Drainage Area BY1.

Water Supplies

SURFACE WATER SUPPLY

The City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B).

FID's average gross annual entitlement is 452,541 AF. Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015. The City's allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water. Over time, the City has received on average 17,011 AFY, though this has varied from 9,452 AF in the severe drought of 2015 to over 24,958 AF in 2017. (Provost & Pritchard, 2021B).

Two additional water districts are located within the City's General Plan Boundaries: Garfield Water District (GWD) and International Water District (IWD). Both have access to Class I CVP surface water supplies. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out, it is estimated that the entire 1,200 AFY supply will be added to the City's Supply. As the districts urbanize, supplies associated with these areas are expected to be added to the City's supply. The City uses their surface water supplies in two primary ways: (1) as potable water supply after being treated at the City's Surface Water Treatment Plant (SWTP) or (2) as groundwater recharge in various basins located in and around the City's service area. (Provost & Pritchard, 2021B).

GROUNDWATER SUPPLY

The City's groundwater supplies stem from the basin underlying the area, the Kings Subbasin; the Subbasin holds a status of being critically over drafted. The Kings Subbasin, a non-adjudicated basin, is a high-priority basin, which lies within the Tulare Lake Hydrologic Basin. This Basin contains multiple interconnected subbasins that transmit, filter and store water. These subbasins are Kaweah and Tulare Lake to the south, Westside and Delta Mendota to the west, and Madera to the North. (Provost & Pritchard, 2021B).

The Kings Subbasin (Subbasin 5-22.08) covers a surface area of approximately 976,000 acres (1,530 square miles). The Department of Water Resources estimated that the total basin storage was about 93,000,000 AF to a depth of more than 1,000 feet. The two major rivers overlying the subbasin are the San Joaquin River and Kings River. The Fresno Slough and James Bypass are along the western edge of the southern basin and connect the Kings River to the San Joaquin River. (Provost & Pritchard, 2021B).

The subbasin does have localized water quality impairments, including Dibromochloropropane (DBCP); Nitrate; Ethylene-Dibromide; 1,2,3-Trichloropropane (TCP); Methyl Tert-butyl Ether (MTBE); uranium; arsenic; hexavalent chromium; perfluoroalkyl substances (PFAS) and petroleum hydrocarbons. High concentrations of fluoride, boron, and sodium can be found in localized areas of the subbasin. (Provost & Pritchard, 2021B).

In 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law to provide a framework for management of groundwater supplies by local agencies and restricts state intervention, if required. SGMA provides an opportunity for local agencies overlying the basin to form a Groundwater Sustainability Agency (GSA), which is the primary agency responsible for achieving sustainability. As part of the region's compliance with SGMA, the North Kings Groundwater Sustainability Agency (NKGSA) was formed and includes representatives from Bakman Water Company, Biola Community Services District, City of Fresno, City of Clovis, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield Water District, and International Water District. The North Kings Groundwater Sustainability Agency adopted a Groundwater Sustainability Plan (GSP) in late 2019.

North Kings Groundwater Sustainability Agency

The City is a member of the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA is working collaboratively, under a coordination agreement with the other six (6) Groundwater Sustainability Agencies in the Kings Subbasin to achieve sustainable groundwater conditions by 2040, in accordance with the Sustainable Groundwater Management Act of 2014 (SGMA) for critically over drafted groundwater basins such as the Kings Subbasin. (Provost & Pritchard, 2021B).

SGMA identifies six (6) sustainability indicators to be monitored and reported in order to document sustainability: lowering groundwater levels, reduced [groundwater] storage, seawater intrusion, degraded [groundwater] quality, land subsidence, and surface water depletion. The NKGSA documents five (5) of those with seawater intrusion not being applicable to this region. (Provost & Pritchard, 2021B).

The City will continue increasing its surface water and recycled water supply usage to a point where the groundwater extraction is not greater than the sustainable yield in a normal year. The sustainable yield is currently estimated at 9,400 AF per year (AFY) for the SOI). (Provost & Pritchard, 2021B).

Potable water production consists of municipal groundwater wells and a surface water treatment plant (SWTP). The total groundwater pumping that occurs within the City boundaries include City-owned municipal wells and City-owned park irrigation wells. The following section provides a

summary of the estimated groundwater pumping that occurs within the current City limits and planning area.

City-Produced Groundwater

The City's system contains more than 30 wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B).

Wells are spaced at intervals across the City and are connected to a distribution system. The pipes are sized for local distribution and have, in certain instances, presented some restrictions to cross-town water supply distribution. The transmission network consists primarily of 12-inch mains on a one-half mile grid with extensive looping. The wells are controlled by a telemetry system that controls pump operation as well as independent controls in case of remote computer failure. (Provost & Pritchard, 2017).

As of 2016, there are 34 wells operating in the City of Clovis system. Of these 34 wells, there are two functioning for standby purposes only. There are also three additional wells operating within the Tarpey system. Typically, wells are put on standby status as a result of water quality problems and are maintained for emergency use. The production rate of the existing wells varies from approximately 300 gallons per minute (gpm) to approximately 2,200 gpm. The total production for the City of Clovis in the year 2014 was approximately 15,500 acre-feet. The Tarpey Village wells accounted for approximately 540 acre-feet of this total. (Provost & Pritchard, 2017).

Existing wells are not evenly distributed across the service area, but rather generally located in the western one-half of the City of Clovis. In general, older wells are in the southwest quarter of the City and the newest wells are located to the northwest quarter of the City. The northern portion of the City of Clovis (north of Herndon Avenue), has experienced the highest growth in recent years, and has dramatically shifted the production and demand characteristics of the City's water system. (Provost & Pritchard, 2017).

Pumping rates for individual City wells in recent years have ranged from about 200 gpm to almost 1,500 gpm. However, the pumping rates for most wells have ranged from about 600 to 1,300 gpm. (Provost & Pritchard, 2017).

The average water level-decline in the City's wells from 2007 to 2014 was 1.5 feet per year. These wells represent an area of about 15,200 acres. When extrapolated over the acreage associated with the SOI boundary (21,100 acres) and the General Plan boundary (47,500 acres), the change in storage is 3,800 and 8,550 acre-feet per year, respectively. (Provost & Pritchard, 2017).

HISTORICAL GROUNDWATER PUMPING

The water system was initially constructed near the turn of the 20th century, when the first municipal well was installed, and, up until July 2004, the City's sole source of drinking water was groundwater. The City currently obtains groundwater from 36 active wells and one standby well,

which have a total capacity of approximately 37,690 gallons per minute (gpm). There are also six planned wells, adding an additional planned capacity of 4,750 gpm, bringing the total well capacity to 42,440 gpm. Two of the existing active wells (Wells 10 and T-5) are offline due to TCP and PFAS water quality concerns, and one well is listed as standby due to iron and manganese concerns. TCP, PFAS, DBCP and high iron (Fe) and manganese (Mn) are the main water quality constraints in the Clovis area. Five (5) more of the City's wells are currently on inactive status due to being dry or producing too much sand (Wells 3, 11, 33, T-1, and T-3). (Provost & Pritchard, 2021B).

In 2020, groundwater provided approximately 49 percent of the total potable water use. The historical volume of groundwater pumped by the City over the past five years is ranged from 10,956 in 2019 to as high as 13,187 in 2016. The groundwater extraction has reduced since 2016 and is expected to continue to be reduced, as discussed later in this section. (Provost & Pritchard, 2021B).

In 2020, recharge was 5,316 AF, while the City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. In the past 30 years, the groundwater table has dropped 48 feet, from a depth of 92 feet in 1991 to a depth of 140 feet in 2019. Recharge efforts began in 1974, and in 2004, the City began utilizing surface water with the goal of reducing groundwater extraction. Recharge efforts by the City have not been enough to stem the decline as the basin is shared with other users who either don't recharge or inadequately recharge. (Provost & Pritchard, 2021B).

WATER SUPPLY ASSESSMENT

A more complete analysis of the water demand and supply for the City of Clovis and the proposed Project is provided in Section 3.14 Utilities.

Flooding

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

Regionally, the major flood issues are associated with the San Joaquin River, the Kings River, and their tributaries. Three major dams have been constructed to control flows on the rivers, including Friant and Mendota Dams on the San Joaquin River and Pine Flat Dam on the Kings River. In addition, a number of reservoirs, detention basins, and canals have been constructed on streams east of the Fresno-Clovis area to prevent flooding and to convey flows around developed areas.

The majority of the Project site is located within the 500-year flood zone (Zone X), which depicts areas with a 0.2-percent (500-year) annual chance flood. The northern and northeastern portion of the Project site, largely outside the Development Area, is within the 100-year flood zone (Zone AH). It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. Figure 3.9-2 shows the 100- and 500-year flood boundaries. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard.

DAM FAILURE

The Project site is located within dam failure inundation areas. Potential inundation from the Big Dry Creek Dam is shown in Figure 3.9-3. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. Larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

SEICHE

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influences by the external causes. Large, inland bodies of water that could generate seiches are retention basins and reservoirs, including the Big Dry Creek Dam, located approximately one mile northeast of the Project site.

TSUNAMI

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. A tsunami can cause catastrophic damage to shallow or exposed shorelines. The Project site is approximately 117 miles from the coastline of the Pacific Ocean, which is sufficiently distant to preclude effects from a tsunami.

MUDFLOW

A mudflow is a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. As a result of this super-saturation, soil and rock materials become unstable and eventually slide away from their existing location. Soils most susceptible to mudflow are saturated, loose, non-plastic, uniformly graded, and fine-grained sand deposits. The Project site is relatively flat making the potential of mudflows low.

Stormwater Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or waste discharge requirements (WDRs). Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush.”

303(d) Impaired Water Bodies

Water quality in the City is governed by the Central Valley Regional Water Quality Control Board (CVRWQCB) (Region 5), which sets water quality standards in their Water Quality Control Plan for the respective basins (Basin Plans). The Basin Plans identify beneficial uses for surface water and groundwater and establish water quality objectives to attain those beneficial uses.

Section 303(d) of the federal CWA requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

There are several areas within Fresno County which are considered Section 303(d) impaired waterbodies. Those areas include Fresno Slough, Hume Lake, James Bypass, Kings River, Long Meadow Creek, Los Gatos Creek, Mill Creek, Panoche Creek, Pine Flat Reservoir, Ramona Lake, and an unnamed tributary near Table Mountain Rancheria. The pollutant categories include: pesticides, nutrients, metals, pathogens, salinity, sediment, and total toxics. The pollutants include: chlorpyrifos, dissolved oxygen, pH, toxicity, alkalinity as CaCO3, selenium, mercury, sedimentation/siltation, lead, and indicator bacteria.

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific. This storm water can carry pollutants that can enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the City include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm, which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in

the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980s. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules, which categorize urban runoff as a point source (an identifiable source) subject to NPDES permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies, these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL

Clean Water Act

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The CWA establishes the basic structure for regulating the discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) the authority to implement pollution control programs. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and mandates permits for wastewater and stormwater discharges.

The CWA also requires states to establish site-specific water quality standards for navigable bodies of water and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The following CWA sections assist in ensuring water quality for the water of the United States:

CWA Section 208 requires the use of best management practices (BMPs) to control the discharge of pollutants in stormwater during construction. CWA Section 303(d) requires the creation of a list of impaired water bodies by states, territories, and authorized tribes; evaluation of lawful activities that may impact impaired water bodies, and preparation of plans to improve the quality of these water bodies. CWA Section 303(d) also establishes TMDLs, which is the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. CWA Section 404 authorizes the US Army Corps of Engineers to require permits that will discharge, dredge or fill materials into waters in the US, including wetlands.

In California, the EPA has designated the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) with the authority to identify beneficial uses and adopt applicable water quality objectives.

The SWRCB is responsible for implementing the CWA and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits).

Federal Emergency Management Agency

FEMA operates the National Flood Insurance Program (NFIP). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flood Control Act

The Flood Control Act (1917) established survey and cost estimate requirements for flood hazards in the Sacramento Valley. All levees and structures constructed per the Act were to be maintained locally, but controlled federally. All rights of way necessary for the construction of flood control infrastructure were to be provided to the Federal government at no cost.

Federal involvement in the construction of flood control infrastructure, primarily dams and levees, became more pronounced upon passage of the Flood Control Act of 1936.

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited Federal assistance, including acquisition, construction, and financial assistance, within delineated floodplains in non-participating NFIP

communities. Furthermore, all Federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction, and developments within SFHAs are generally subject to the following standards:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the base flood elevation (BFE).
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE.
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: *Better indemnify individuals for flood losses through insurance; Reduce future flood damages through State and community floodplain management regulations; and Reduce Federal expenditures for disaster assistance and flood control.*

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level.

National Pollutant Discharge Elimination System (NPDES)

NPDES permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal CWA, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal CWA and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the CWA's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Individual projects in the City that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Rivers and Harbors Appropriation Act of 1899

One of the country's first environmental laws, this Act established a regulatory program to address activities that could affect navigation in Waters of the United States.

Water Pollution Control Act of 1972

The Water Pollution Control Act (WPCA) established a program to regulate activities that result in the discharge of pollutants to waters of the United States

STATE

California Fish and Wildlife Code

The California Department of Fish and Wildlife (CDFW) protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1600 to 1616 of the California Fish and Game Code. The California Fish and Game Code establishes that "an entity may not substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river stream, or lake" (Fish and Game Code Section 1602(a)) without notifying the CDFW, incorporating necessary mitigation and obtaining a streambed alteration agreement. The CDFWs jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Government Code

Relevant sections of the California Government Code are identified below.

SECTION 65302

Revised safety elements must include maps of any 200-year flood plains and levee protection zones within the Planning Area.

SECTION 65584.04

Any land having inadequate flood protection, as determined by FEMA or DWR, must be excluded from land identified as suitable for urban development within the planning area.

SECTION 8589.4

California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a "100-year flood." In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Consumer Confidence Report Requirements

The preparation of Consumer Confidence Reports (CCRs) is required by Health & Safety Code §116470 and California Code of Regulations, Title 22, Article 20. Health & Safety Code §116470(b) also requires public water systems with more than 10,000 service connections that detect contaminants above their public health goals (PHGs) to provide PHG exceedance reports every three years and to hold public hearings regarding their reports.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Assembly Bill 162

Assembly Bill (AB) 162 requires a general plan's land use element to identify and annually review those areas covered by the general plan that are subject to flooding as identified by flood plain mapping prepared by FEMA or DWR. The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. By imposing new duties on local public officials, the bill creates a State-mandated local program.

This bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify, among other things, information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding.

Assembly Bill 70

AB 70 provides that a city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that it has increased the State's exposure to liability for property damage by unreasonably approving, as defined, new development in a

previously undeveloped area, as defined, that is protected by a State flood control project, unless the city or county meets specified requirements.

Senate Bill 610 and Assembly Bill 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed Project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

200-Year Flood Protection in the Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in

order to approve development. The new law restricts approval of development after 2016 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2028. Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;
2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;
3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

State Updated Model Landscape Ordinance

Under AB 1881, the updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. Clovis Development Code Chapter 9.28 includes landscaping water use standards. Clovis Development Code Chapter 6.5, Article 5 includes the City's Water Efficient Landscape Requirements that were modeled after the State's Model Ordinance.

NPDES Construction General Permit

SWRCB Order No. 2009-0009-DWQ known as the "Construction General Permit" was adopted on September 2, 2009 and was amended by Order No 2012-0006-DWQ, which became effective on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

- Reduce erosion
- Minimize or eliminate sediment in stormwater discharges
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program
- Eliminate unauthorized non-stormwater discharges from construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
- Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement SWPPPs. The SWPPP documents the selection and implementation of BMPs for a specific construction project, charging owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Water Quality Control Basin Plan

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), amended by the CVRWQCB in 2018, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and freshwater replenishment.

State Water Resources Control Board Storm Water Strategy

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board's role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues.

The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board's Storm Water Program.

REGIONAL AND LOCAL

Fresno-Clovis Storm Water Quality Management Program

The Storm Water Quality Management Program (SWQMP) was developed pursuant to Order No. R5-2013-0080, issued by the Central Valley RWQCB in 2013. The municipal National Pollutant Discharge Elimination System (NPDES) stormwater permit (MS4 Permit) was issued to the FMFCD, the Cities of Fresno and Clovis, the County of Fresno, and the California State University at Fresno by the Central Valley RWQCB on May 31, 2013. The SWQMP includes specific pollution prevention and control practices for Fresno-Clovis urban drainage system planning, design, construction, and maintenance. It also includes public education to prevent stormwater pollution; specifies construction, industrial/commercial, municipal, and new development stormwater quality control practices; procedures to prevent and respond to illicit discharges and connections; monitoring to

assess municipal stormwater impacts on receiving waters; and program effectiveness assessments (PEA) to evaluate the effectiveness of best management practices (BMPs).

The SWQMP "control measures" refer to activities intended to minimize, reduce, eliminate, or prohibit the discharge of pollutants with the goal of improving water quality. The benefits of these control measures are assessed through evaluation of associated performance standards. The performance standards include schedules and milestones for implementation.

City of Clovis General Plan

The City of Clovis General Plan includes several policies relevant to hydrology and water quality. General Plan goals and policies applicable to the Project are identified below:

ENVIRONMENTAL SAFETY ELEMENT

- Goal 1: Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural hazards.
- Policy 1.1: Flood Zone - Prohibit development within the 100-year flood zone and dam inundation areas unless adequate mitigation is provided against flood hazards. Participate in the National Flood Insurance Program.

OPEN SPACE AND CONSERVATION ELEMENT

- Goal 3: A built environment that conserves and protects the use and quality of water and energy resources.
- Policy 3.1: Stormwater management. Encourage the use of low impact development techniques that retain or mimic natural features for stormwater management.
- Policy 3.2: Stormwater pollution. Minimize the use of non-point source pollutants and stormwater runoff.

City of Clovis Municipal Code

The City of Clovis Municipal Code Chapter 6.7 establishes the City's Urban Storm Water Quality Management and Discharge Control Ordinance. The purpose of the ordinance is to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in urban storm water discharges to the maximum extent practicable and by effectively prohibiting non-storm water discharges to the storm drain system. The ordinance prohibits any discharge that could result in or contribute to a violation of the municipal NPDES storm water discharge permit. It requires Best Management Practices (BMPs) to control the volume, rate, and potential pollutant load of storm water runoff from new development and redevelopment projects.

Chapter 8.7 requires payment of local drainage fees to fund construction of local drainage facilities and improvements.

Chapter 8.12 provides for floodplain management and regulates development in floodplains. A development permit must be obtained before construction or development within any area of special flood hazard. Permits require provisions for flood hazard reduction, including anchoring, flood-resistant materials, and construction methods to floodproof the structure.

Chapter 9.110 provides subdivision design and improvement requirements. Per Section 9.110.040, a grading plan is required to be submitted to and approved by the City Engineer prior to issuance of a subdivision-level building permit. Subdivisions are required to incorporate appropriate erosion and sediment control measures.

Chapter 9.28 contains landscaping standards and requires a landscape design plan, irrigation design plan, and soil analysis in order to reduce runoff and control soil erosion as part of the landscape documentation package.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    - 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
    - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION

Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements. (Less than Significant)

CONSTRUCTION PHASE

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not

meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, storm water runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed Project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

> *"…Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded…"*

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

> *"Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed…Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions…All measures must be periodically inspected, maintained and repaired to ensure that receiving water*

quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended…"

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities could also result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a **less than significant** impact relative to this topic.

OPERATIONAL PHASE

The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. Normal activities in residentially developed areas include the use of various automotive petroleum products (i.e., oil, grease, and fuel), common household hazardous materials, heavy metals, pesticides, herbicides, fertilizers, and sediment. Within urban areas, these pollutants are generally called non-point source pollutants. The pollutant levels vary based on factors, such as time between storm events, volume of storm event, type of uses, and density of people.

Stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the FMFCD. FMFCD's stormwater drainage system discharges to irrigation canals, creeks, and the San Joaquin River. The system is designed to accept the peak flow rate of runoff from a two-year

intensity storm event (a storm that has a 50 percent probability of occurring in any given year) (FMFCD, 2022b). When storm events occur that exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. If the storm is of sufficient intensity to generate more water than the street can store, the water will continue to rise until it reaches a topographic outlet where it can escape down gradient.

The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's facilities.

Additionally, there are various non-structural and structural stormwater BMPs that can be implemented to reduce water pollution. Non-structural BMPs are typically aimed at prevention of pollution through public education and outreach. Non-structural BMPs include: school educational programs, newsletters, website information, commercial, billboards/advertisements, river cleanups, and storm drain stenciling. Structural BMPS are aimed at the physical collection, filtering, and detaining of stormwater. Structural BMPs include items such as drop inlet filters, vault filters, hydrodynamic separators, surface detention basins, and underground detention facilities.

The following are standards rules implemented in the form of BMPs to reduce the amount of pollution in stormwater discharged from the Project site.

- Pollution Prevention/Good Housekeeping
    - Prior to clearing, grading, and disturbances to the ground, such as stockpiling, or excavation in each phase of the Project, the Project proponent shall develop a spill response and prevention plan as a component of (1) SWPPPs prepared for construction activities, (2) SWPPPs for facilities subject to the NPDES Stormwater Permit, and (3) spill prevention control and countermeasure plans for qualifying facilities. The spill response and prevention plan shall be implemented during all construction activities.
    - Streets and parking lots in all non-residential portions, including the right-of-way, of the Project site shall be swept at least once every two weeks.
- Extended Detention Facilities: Extended detention refers to the facilities proposed for the Project site that would detain and temporarily store stormwater runoff to reduce the peak rates of discharge to the storm drainage system. Detention of stormwater allows particles and other pollutants to settle and thereby potentially reduce concentrations and mass loading of contaminants in the discharge.
- Grassed Swales: A swale is a vegetated, open channel management practice designed to treat and attenuate stormwater runoff for a specified water quality volume. Stormwater

runoff flowing through these channels is treated by being filtered through vegetation in the channel, through a subsoil matrix, and/or through infiltration into the underlying soils. Swales can be used throughout the proposed Project area where feasible in the landscape design to treat street right-of-way parking runoff.

- Proprietary Devices: There are a variety of commercially available stormwater treatment devices designed to remove contaminants from drainage once flows enter the conveyance systems. StormFilter™ units, or equivalent filtration-type systems, and Bioswales are recommended for streets and parking areas. Drop inlet filters should also be used to control drainage runoff water quality.

BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff.

Table 3.9-2 identifies the soils in the Project site and the soils infiltration rate.

TABLE 3.9-2: SOILS HYDROLOGIC RATING

NAME	*% OF DEVELOPMENT AREA*	*% OF NON-DEVELOPMENT AREA*	*HYDROLOGIC RATING*
An - Alamo clay	0.0%	0.3%	D
ArA - Atwater sandy loam, 0 to 3 percent slopes	13.8%	21.1%	A
Gf - Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17	29.4%	11.1%	A/D
Gg - Grangeville fine sandy loam, saline alkali	4.3%	0.1%	B
Re - Ramona loam, hard substratum	26.0%	40.3%	C
Rh - Riverwash	1.0%	0.1%	N/A
SeA - San Joaquin loam, 0 to 3 percent slopes	14.7%	16.5%	C
TzbA - Tujunga loamy sand, 0 to 3 percent slopes	0.0%	2.4%	A
VaA - Visalia sandy loam, 0 to 3 percent slopes	10.7%	8.1%	A

SOURCE: NCRS 2022

The soils contained on the Project site have a hydrologic rating ranging from “A,” which is indicative of soils having a high infiltration rate (low runoff potential) when thoroughly wet, to “D,” which is indicative of soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. Figure 3.2-2 identifies Project site soils.

The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in several of the borings at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project’s storm drainage system and eventually flow into the San Joaquin River.

The Project site is located in the Kings Groundwater Subbasin. As previously stated, the Kings Subbasin is recharged by water from sources including streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge at numerous facilities. Intentional recharge is conducted in recharge ponds and on some farm fields with compensation to landowners. The hardpan encountered on the Project site generally does not allow for a high infiltration rate. While the proposed Project would result in an increase in the amount of impervious surfaces within the Project site when compared to existing conditions, it is not anticipated that the proposed development would interfere with groundwater recharge, as much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from Sierra Nevada snowmelt flowing downstream.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040, as required. The supply from groundwater sources has been modified to reflect this change in the City’s supply portfolio. In the 2010 and 2015 UWMPs, the City’s groundwater supplies were shown to be increasing with population growth into the future. The historical volume of groundwater pumped by the City from 2016 to 2020 ranged from 10,956 in 2019 to as high as 13,187 in 2016. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The City’s 30-year average groundwater recharge quantity is approximately 8,412 AFY. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

The City has been searching for additional land to construct another dedicated groundwater recharge facility in the City. The facility will likely be in North Clovis upgradient of City wells. A minimum of 20 to 40 acres is desired with a minimum recharge capability of 1,500 to 3,000 AF per

year. An additional project that the City is pursuing in cooperation with FID, FMFCD, and the City of Fresno, is either reoperation of Big Dry Detention Basin, known as the Redbank-Fancher Creeks Flood Control Project, to allow storage of East Side Stream Flood releases or a project to increase recharge capabilities upstream of the Basin. This is currently in the study phase. (Provost & Pritchard, 2021B).

In addition, there are two banking facilities, the Waldron Banking Facilities (WBF) and Boswell Groundwater Banking Facility (BGBF), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City plans on taking the water in dry years to augment supply. (Provost & Pritchard, 2021B).

The groundwater supplies the City relies upon are not in the process of adjudication. The surface water supplies have either long-range contracts or newly executed contracts to document quantities and availability to the City. (Provost & Pritchard, 2021B).

Recycled water is considered a consistent source; however, because it is mainly dependent upon indoor residential use, it is susceptible to water rationing. In 2020, the City utilized approximately 28 percent of its treated wastewater, an increase over past years; however, the use primarily was limited by its existing infrastructure and seasonal need. The amount of recycled water the City intends to use for beneficial purposes is expected to increase as additional infrastructure is built, wastewater generation increases, and the Clovis Water Reuse Plant expands. (Provost & Pritchard, 2021B).

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City's planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The 'sustainable yield' is defined as the amount of groundwater pumping that can occur while maintaining groundwater at sustainable levels and avoiding undesirable results. The sustainable yield can be estimated as the total groundwater recharge (from natural and artificial sources) minus the groundwater outflow (as shown below). The GSP of the North Kings Groundwater Sustainability Agency indicates that the sustainable yield of the groundwater basin is approximately 1,140,000 AFY/acre (1,360,000 AF -220,000 AF).

CONCLUSION

A full water supply assessment is provided in Section 3.14 Utilities. The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The

water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. As such, implementation of the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.9-3: The proposed Project has the potential to alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding, or polluted runoff. (Less than Significant)

Currently, runoff from within the Project site is collected in a system of shallow agricultural and roadside ditches. Public storm drain facilities are not currently installed in the agricultural fields. Planned urbanization of the Project site would result in changes to land use and infiltration characteristics and would introduce new sources of water pollutants, producing "urban runoff." Pollutants contained within urban runoff may include, but are not limited to, sediment, oxygen-demanding substances (e.g., organic matter), nutrients (primarily nitrogen and phosphorus), heavy metals, bacteria, oil and grease, and toxic chemicals that can degrade receiving waters. Urban runoff pollutants may stem from erosion of disturbed areas, deposition of atmospheric particles derived from automobile or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, decomposing plant materials, animal excrement, and spills of toxic materials on surfaces, which receive rainfall and generate runoff. New residential uses within the Project site may also generate urban runoff from streets and driveways. Yard areas may produce fertilizer wastes and/or bacterial contamination from animal excrement.

Stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the Fresno Metropolitan Flood Control District (FMFCD). The FMFCD operates under a Storm Water Quality Management Program, which is assessed on an annual basis to demonstrate compliance with the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) municipal stormwater permit (CA0085324) for the FMFCD. The FMFCD is the lead permit agency, and Co-Permittees are the Cities of Fresno and Clovis, the County of Fresno, and California State University, Fresno (CSUF).

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

FMFCD will require lot coverage to be provided prior to submittal of improvement plans. The lot coverage is calculated by the District to include the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation. This calculation cannot be calculated at this time given that building plans and lot specific landscaping and site improvements have not been prepared. This very detailed level of design would be performed at either the improvement plan or building plan phase of the project. Ultimately, FMFCD charges a drainage fee that is calculated commensurate with the lot coverage calculation.

FMFCD reviews all grading and improvement plans for consistency with the FMFCD Master Plan. This review ensures that grading does not have an adverse impact to major storm conveyance and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. They require all projects to provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

The initial review by FMFCD has indicated that the "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1." The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). FMFCD has indicated that the existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. FMFCD has indicated that the "Development Area" is required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. FMFCD indicated that the "Development Area" may either make improvements to the existing pipeline system to provide additional capacity or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. FMFCD requested that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of design prior to preparing a grading plan.

FMFCD noted that the construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities (as shown on Exhibit No. 1 of their letter), will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by in Tracts 6292 and 6344. If these optional facilities are not constructed, FMFCD recommends temporary facilities until permanent service is available.

FMFCD noted that the "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area." The "Development Area" shall verify to the satisfaction of FMFCD that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

FMFCD noted that the "Development Area" must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns, some of the streets located within the "Development Area" may need to be resized or reconfigured (including, but not limited to, streets that include traffic calming curbs) to pass larger event storms. FMFCD approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.9-4 The proposed Project has the potential to otherwise substantially degrade water quality. (Less than Significant)

Water Quality Impacts from Discharges to 303(d) Listed Water Bodies: Section 303(d) of the federal Clean Water Act (CWA) requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the regional vicinity of the Project site that are impaired are referred as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

The San Joaquin River is specifically listed by the Central Valley Regional Water Quality Control Board (CVRWQCB) as an impaired water body due to mercury under the Clean Water Act. Mercury is a sediment-based pollutant that can be released into the water column during various in-water construction activities (e.g., construction of the storm drain outfall) that may disturb the sediment and cause turbidity. As a result, such activities may increase the likelihood of mercury exposure to the public and wildlife that utilize the San Joaquin River.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the

RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on-site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB.

The ongoing operational phase of the proposed Project (all phases) requires discharge of stormwater into the on-site detention basins, which would ultimately flow into FMFCD system. The discharge of stormwater must be treated through BMPs prior to its discharge. The standards and regulations contained above would ensure that BMPs are implemented to reduce the amount of pollution in stormwater discharged from the Project site into the FMFCD system. Storm water drainage is managed through the implementation of BMPs to the extent they are technologically achievable to prevent and reduce pollutants. The City requires reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would violate water quality standards.

The use of BMPs is intended to treat runoff close to the source during the construction and long-term operational phase of the Project to reduce stormwater quality impacts. The previously described control measures listed are existing regulatory requirements. Development of proposed Project in compliance with the regulatory control measure requirements, would have a **less than significant** impact relative to this topic.

Impact 3.9-5 The proposed Project would place housing or structures that could impede/redirect flows within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. (Less than Significant)

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be **less than significant** and no new structures would be constructed within the 100-year flood plain.

Impact 3.9-6 The proposed Project has the potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow. (Less than Significant)

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. A tsunami can cause catastrophic damage to shallow or exposed shorelines. The Project site is approximately 117 miles from the coastline of the Pacific Ocean, which is sufficiently distant to preclude effects from a tsunami.

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influenced by the external causes. The Project site is not adjacent to any lakes that pose a significant risk from a seiche event.

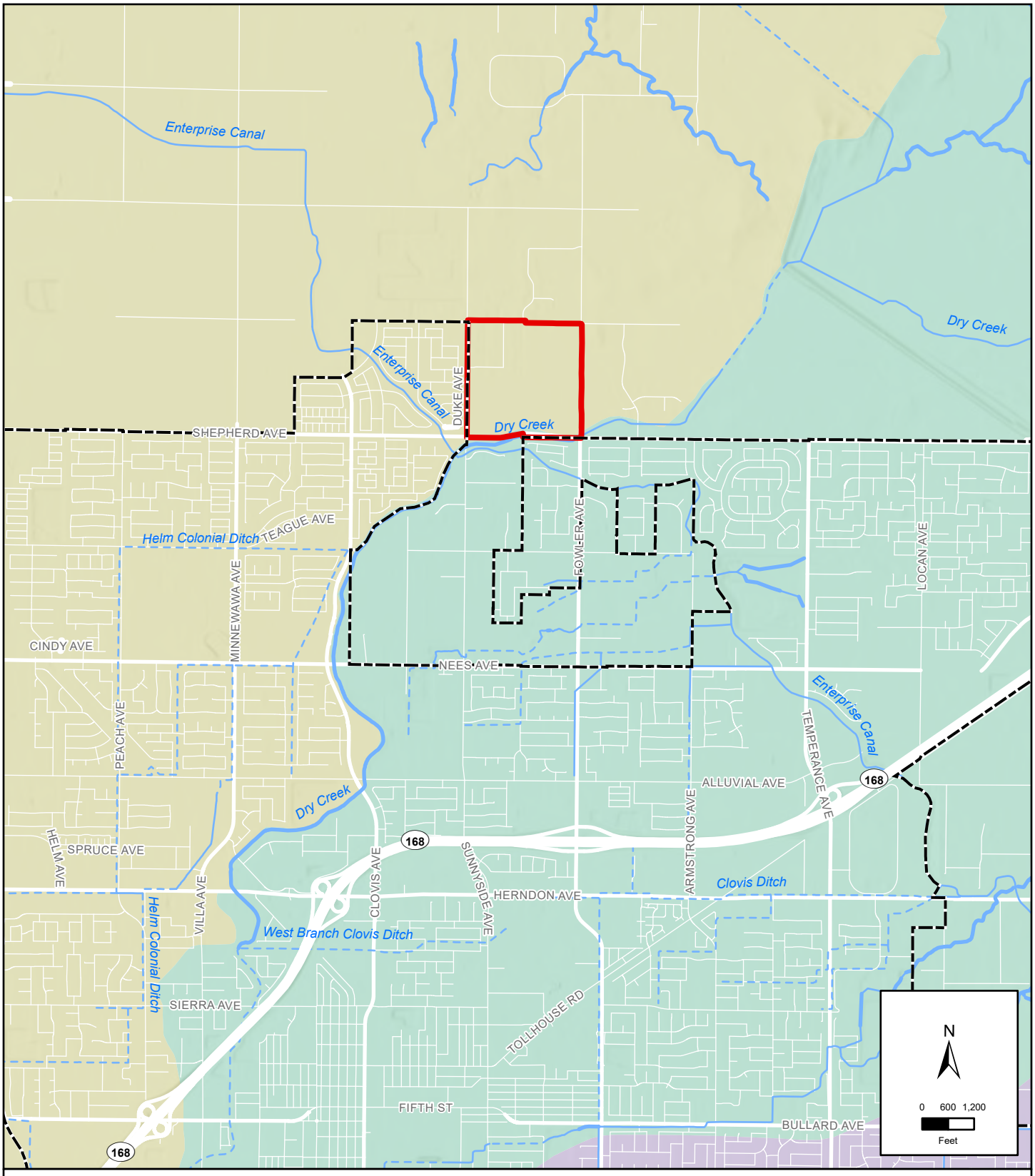
A mudflow is a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. As a result of this super-saturation, soil and rock materials become unstable and eventually slide away from their existing location. Soils most susceptible to mudflow are saturated, loose, non-plastic, uniformly graded, and fine-grained sand deposits. The Project site is relatively flat making the potential of mudflows low.

The Project site is subject to flood inundation as a result of dam failure. Figure 3.9-3 shows areas that are susceptible to dam inundation. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. As discussed previously, larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, DSD. DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is

responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

The proposed Project is not anticipated to result in the exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow. This impact is considered **less than significant**.



LEGEND

- Project Boundary
- Clovis City Limits

Waterways

- Perennial Stream
- Pipeline, Connector, or Artificial Path
- Canal or Ditch

Watersheds

- Dog Creek-Fish Slough
- Dry Creek
- James Bypass

SHEPHERD NORTH PROJECT

Figure 3.9-1 Watershed

Sources: Fresno County GIS; USGS; NHD; WBD. Map date: May 8, 2023.

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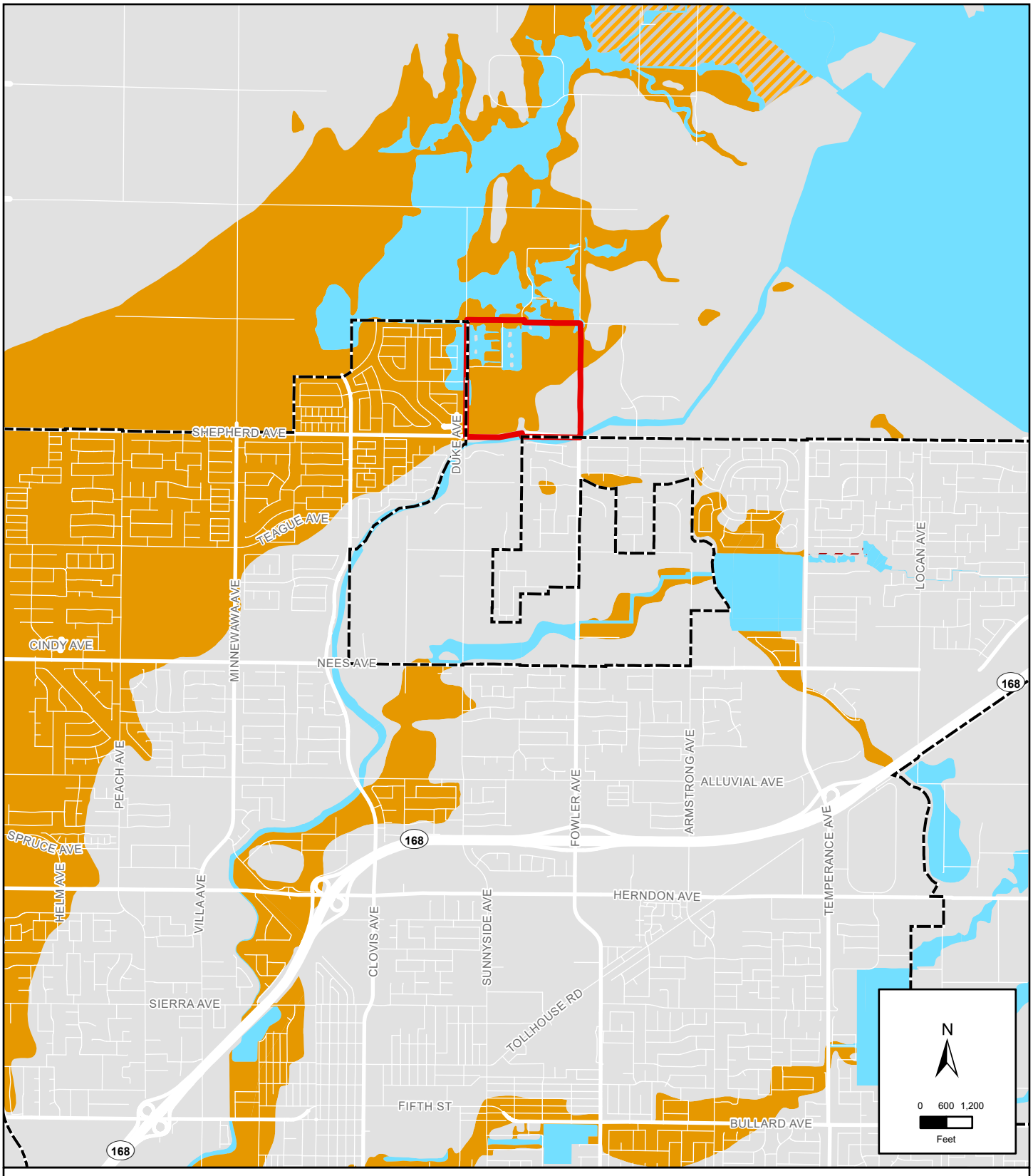

LEGEND

- Project Boundary
- Clovis City Limits

FEMA Designation

- 100-Year Flood Zone
- 500-Year Flood Zone
- Regulatory Floodway
- Area of Minimal Flood Hazard
- Area with Reduced Flood Risk due to Levee

SHEPHERD NORTH PROJECT

Figure 3.9-2 FEMA Flood Zones

Sources: Fresno County GIS; FEMA. Map date: May 8, 2023.

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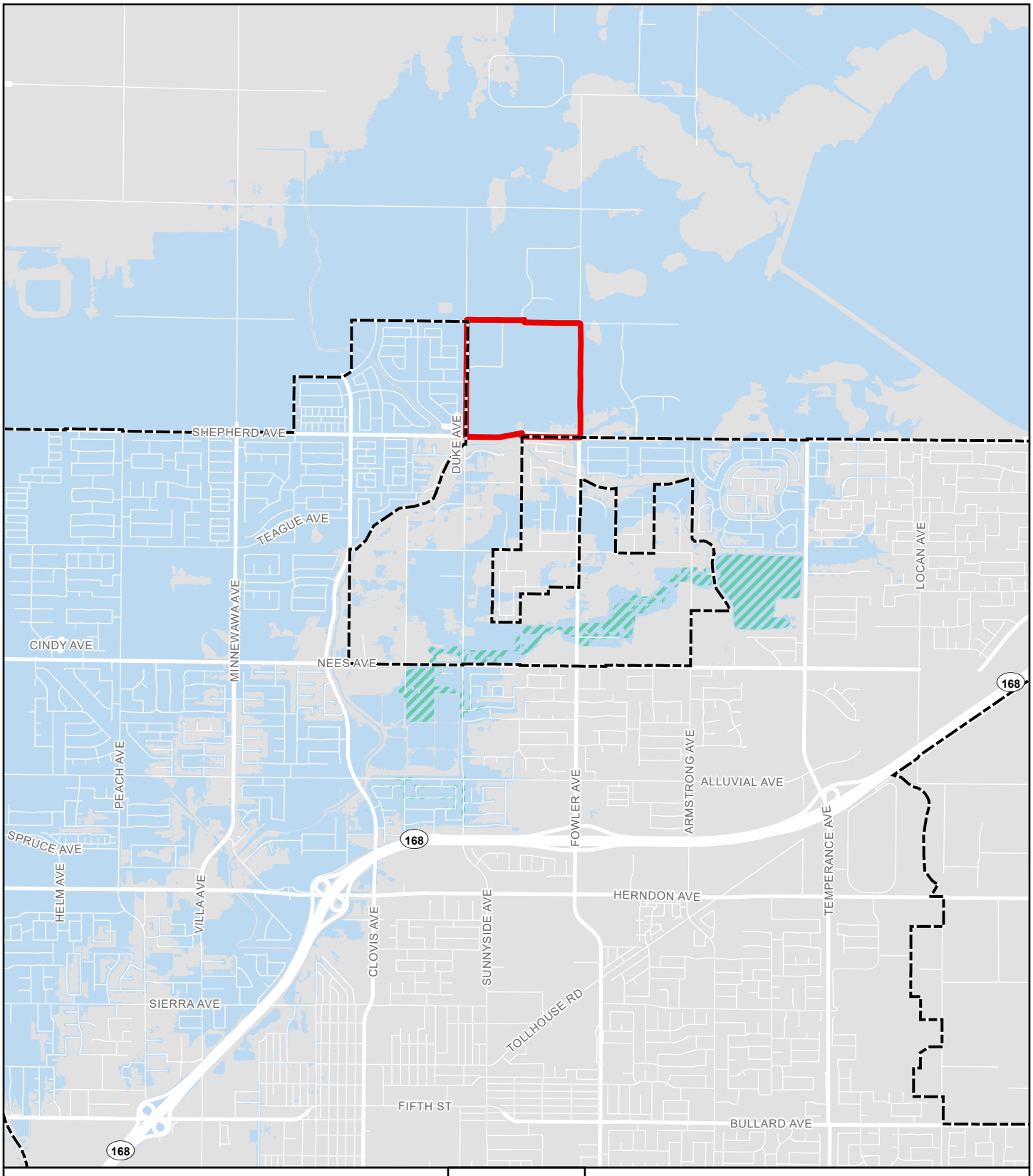

LEGEND

- Project Boundary
- Clovis City Limits
- Alluvial Drain Detention Dam Inundation Area
- Big Dry Creek Dam Inundation Area

Sources: Fresno County GIS; DWR. Map date: May 8, 2023.

N

0 600 1,200

Feet

SHEPHERD NORTH PROJECT

Figure 3.9-3 Dam Inundation

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This section describes the existing land uses on the Project site and in the surrounding area, describes the applicable land use regulations, and evaluates the environmental effects of implementation of the proposed Project related to land use, population, and housing. Information in this section is based on information provided in the proposed Project materials and the following reference documents:

- *2014 Clovis General Plan (City of Clovis, 2014);*
- *2014 Clovis General Plan Draft Program Environmental Impact Report (City of Clovis, 2014);*
- *2000 Fresno County General Plan (City of Clovis, 2000);*
- *2018 Fresno County Zoning Ordinance (City of Clovis, 2018);*
- *City of Clovis Municipal Code, Title 9 – Development Code (City of Clovis, 2022).*
- *A Landscape of Choice: Strategies for Improving Patterns of Community Growth (The Growth Alternatives Alliance, April 1998)*

There were no comments received during the public review period or scoping meetings for the Notice of Preparation regarding this topic.

3.10.1 ENVIRONMENTAL SETTING

EXISTING PHYSICAL ENVIRONMENT

The Clovis Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue.

The City of Clovis is in the central portion of Fresno County, approximately 6.5 miles northeast of the City of Fresno downtown area. The City is surrounded by portions of unincorporated Fresno County to the north, east, and south and by the City of Fresno to the west and southwest. At the local level, the Plan Area is generally bounded by Copper Avenue on the north, Willow Avenue on the west, Academy Avenue on the east, and Shields Avenue on the south. State Route 168 (SR-168) bisects the City from the southwest to the northeast.

Project Site

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Tract Map, and Residential Site Plan Review.

- Non-Development Area - Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.

Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Figure 2.0-6 shows aerial imagery of the existing site uses within the Project site.

Surrounding Land Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

DEMOGRAPHICS

Population Trends

The City experienced a population increase from 2000 to 2010 of 27,163 persons (39.7%) as shown in Table 3.10-1. During the period from 2010 to 2022, population continued to increase in the City, resulting in a total population of 123,665 in 2022.

TABLE 3.10-1: POPULATION GROWTH

YEAR	POPULATION	CHANGE	PERCENT CHANGE
2000	68,468	--	--
2010	95,631	27,163	39.7%
2020	123,665	28,034	29.3%

SOURCES: CITY OF CLOVIS GENERAL PLAN EIR, TABLE 5.13-1; CA DOF, 2020.

Housing Stock

Table 3.10-2 summarizes the growth of the City's housing stock between 2000 and 2022. The number of housing units increased from 25,265 in 2000 to 35,226 in 2010. This represents 39.4 percent growth in the City's housing stock. The City's housing stock totaled 45,835 units in 2022.

TABLE 3.10-2: HOUSING UNIT GROWTH

YEAR	HOUSING UNITS	CHANGE	PERCENT CHANGE
2000	25,265	--	--
2010	35,226	9,961	39.4%
2020	45,835	10,609	30.1%

SOURCES: CITY OF CLOVIS GENERAL PLAN EIR, TABLE 5.13-2; CA DOF, 2020.

Persons Per Dwelling Unit

According to the most recent Department of Finance (2022) estimate, the average number of persons residing in a dwelling unit in the City of Clovis is 2.81.

3.10.2 REGULATORY SETTING

STATE

Government Code

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a jurisdiction and of any land outside its boundaries that, in the jurisdiction's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the jurisdiction's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a

blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd. [c]).

State of California Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. In approving an annexation, the Local Agency Formation Commission (LAFCo) will consider the following factors:

- Population and population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; and the likelihood of significant growth in the area and in adjacent incorporated and unincorporated areas during the next ten years.
- The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; and the probable effect of the proposed incorporation, formation, annexation, exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.
- The effect of the proposed action and of alternative actions on adjacent areas, on mutual social and economic interests, and on the local government structure of the county.
- The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, and efficient patterns of urban development, and the policies and priorities set forth in Government Code section 56377.
- The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Government Code section 56016.
- The definiteness and certainty of the boundaries of the territory, nonconformance of proposed boundaries with lines of assessment or ownership, creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.
- Consistency with city or county general and specific plans.
- The sphere of influence of any local agency that may be applicable to the proposal being reviewed.
- The comments of any affected local agency.
- The ability of the newly formed or receiving entity to provide the services that are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.

- Timely availability of water supplies adequate for projected needs as specified in Government Code section 65352.5.
- The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs, as determined by the appropriate council of governments consistent with Housing Element laws.
- Any information or comments from lawmakers.
- Any information relating to existing land use designations.

In addition to the above factors, LAFCo may also consider any resolution raising objections to the action that may be filed by an affected agency; and any other matters which the commission deems material.

Senate Bill 330

Senate Bill 330 "The Housing Crisis Act of 2019" is a statewide bill intended to reduce the time it takes to approve housing developments in California. SB 330 would declare a statewide housing emergency to be in effect until January 1, 2030. During that period, cities and counties found to have high rents and low rental vacancy rates would:

- Be prohibited from reducing housing densities, increasing development fees, or taking a range of other actions affecting housing development (both for-sale and rental);
- Have any such actions taken since January 1, 2018 declared null and void;
- Be prohibited from imposing fees on new units that are deed restricted for families earning less than 80% of the area median income;
- Be prohibited from enforcing requirements that new developments include parking;
- Be required to process housing development applications under the general plan and zoning ordinance in effect at the time the application is deemed complete.

Other provisions of SB 330 would apply to all jurisdictions not only those with high rents and low vacancy rates. These include requiring cities and counties to process housing development applications under the general plan and zoning ordinance in effect at the time the application is deemed complete, a ban on holding more than three de novo public hearings on a project, and a requirement that cities and counties post all development standards online. The bill would also call for the State Department of Housing and Community Development to update building standards for "occupied substandard buildings."

LOCAL

Fresno Council of Governments

The Fresno Council of Governments (FCOG) is an association of local governments from cities within Fresno County. The member agencies include City of Clovis, City of Coalinga, City of Firebaugh, City of Fowler, City of Fresno, City of Huron, City of Kerman, City of Kingsburg, City of Mendota, City of Orange Cove, City of Parlier, City of Reedley and City of San Joaquin, City of Sanger, City of Selma, and County of Fresno. FCOG is responsible for the preparation of, and updates to, the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the region. The RTP/SCS

provides a 25-year transportation vision and strategies for air emissions reduction. The 2018 MTP/SCS was adopted by the FCOG board in July 2017.

REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

The 2018 RTP is a long-range plan for transportation improvements in the region. The RTP identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifying anticipated available funding for the over 3,000 projects and multiple programs. The plan is based on projections for growth in population, housing, and jobs. FCOG determines the regional growth projections by evaluating baseline data (existing housing units and employees, jobs/housing ratio, and percent of regional growth share for housing units and employees), historic reference data (based upon five- and ten-year residential building permit averages and historic county-level employment statistics), capacity data (General Plan data for each jurisdiction), and current RTP data about assumptions used in the most recent RTP/SCS. FCOG staff then meets with each jurisdiction to discuss and incorporate more subjective considerations about planned growth for each area. Finally, FCOG makes a regional growth forecast for new homes and new jobs, based upon an economic analysis provided by a recognized expert in order to estimate regional growth potential based on market analysis and related economic data. This growth forecast is then incorporated into the RTP/SCS.

REGIONAL HOUSING NEEDS PLAN

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as the Regional Housing Needs Allocation (RHNA). FCOG is the lead agency for developing the RHNA that includes Fresno County and the City of Clovis. If a jurisdiction failed to make adequate sites available to accommodate the RHNA in the previous planning period, AB 1233 (Government Code Section 65584.09) requires the jurisdiction to identify and, if necessary, rezone sites in the first year of the current planning period to address the unaccommodated lower-income RHNA from the previous planning period. This requirement is in addition to the requirement to identify other specific sites to accommodate the RHNA for the current planning period. The City may not count capacity on the same sites for both planning periods.

Fresno Local Agency Formation Commission

The Fresno LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Any annexation of the Project site to the City is subject to LAFCo approval, and LAFCo will review proposed annexations for consistency with LAFCo's Annexation Policies and Procedures.

Fresno LAFCo has adopted Policies and Procedures for Annexation and Detachment to and from all agencies within their jurisdiction. It is Fresno LAFCo policy (102-01) that "within the sphere of influence each agency should implement an orderly, phased annexation program. A proposal should not be approved solely because the area falls within the sphere of influence of an agency." The City of Clovis follows the Policies and Procedures for Annexation and Detachment when annexing land into the City. LAFCo recommends that each local agency fulfill this policy through the exercise of one or more of the following basic principles and actions:

1. The annexation program is consistent with LAFCo's Sphere of influence (SOI) for the City.

Suggested actions:

- City and county shall reach agreement on development standards and planning and zoning requirements within the sphere to ensure that development within the sphere occurs in a manner that reflects the concerns of the affected city and is accomplished in a manner that promotes the logical and orderly development of areas within the sphere. GC §56425
- City responds to a request to extend service outside of its city limits and SOIs in consultation with GC §56133 and Fresno LAFCo policy.

2. The annexation program clearly implements the city's general plan.

Suggested actions:

- City annexation applications shall describe how the proposal implements the City's general plan and support these statements with information from other official sources, such as the annual budget, capital improvement plan, and so forth.
- A prezoning ordinance shall not be encumbered with extraneous conditions that preclude the ordinance's effective date by the time of LAFCo hearing on the annexation.

3. The annexation program emphasizes the use of cities' resolution of application versus property owner/registered voter petitions.

Suggested action:

- For the City to consider opposing property owner petition-initiated reorganizations as these would not have proceeded through the process of City development review and approval, which is an important step in the management of a City's general plan.

4. The annexation program supports orderly growth by identifying areas to be annexed, general time frames for growth, and a plan for extension of services to these areas.

Suggested actions:

- Capital improvement plan and/or facilities plans include all lands within the SOI;
- Development impact fees that fund the extension of services are established and maintained;
- Impacts to service delivery are assessed in the City's EIR or project-specific CEQA documents and appropriately-scaled mitigation is approved and implemented.
- The City coordinates its public policy documents in support of the annexation program.

5. The annexation program anticipates changes of organization of existing service districts and service areas in the SOI or adjacent to the SOI.

Suggested action:

- The Program should describe the transition of services that will occur when the City annexes/detaches (CID, NCFPD, FCFPD, KRCD, etc.); inversely, the document describes the status of or continuation of services when annexations do not result in detachment (FID, FMFCD, etc.).

6. The annexation program anticipates the location of Disadvantaged Unincorporated Communities within a City's sphere of influence.

Suggested action:

- Cities should become proficient in implementing their responsibilities under Senate Bill 244, should review Fresno LAFCo DUC policy and review Senate Bill 244 Technical Advisory.

7. The annexation program informs citizens in annexation areas of their rights, benefits, and changes that will occur on annexation.

Suggested actions:

- City to establish and maintain on its website a description of the information above, how citizens can engage the process, how the City engages citizens and stakeholders and other information related to annexation. This information should include a description of the SOI, protest processes, and how LAFCo is involved.
- For those portions of a City's SOI that contain a large number of rural residential parcels that are planned for urban uses, the City is strongly encouraged to develop a long-term plan to annex and serve these areas.

8. The annexation program will be coordinated with LAFCo's Municipal Services Review (MSR) for the City.

Suggested action:

- City applications should include an assessment of current MSR determinations and recommendations.

9. The annexation program is managed by an assigned and responsible City staff member.

Suggested action:

- City identifies a staff member to serve as a genuine point of contact with LAFCo, that is, a staff member responsible and accountable for managing applications, knowledgeable of the project and of LAFCo's process, and empowered to facilitate the City's annexation program.

10. City entitlement analysis is integrated with LAFCo policies

Suggested action:

- Local agencies, including Fresno County, are strongly advised to include Fresno LAFCo in their initial request for comments.

- When initial planning applications that will eventually require annexation are submitted to cities, they are encouraged to submit a pre-application to LAFCo, so that LAFCo can track the project at its beginning and provide comments that would facilitate annexation in time for these to be considered in a timely and efficient manner.

City of Clovis General Plan

As noted above, General Plans are prepared under a mandate from the State of California, which requires each city and county to prepare and adopt a comprehensive, long-term general plan for its jurisdiction and any adjacent related lands. State law requires General Plans to address seven mandated components: circulation, conservation, housing, land use, noise, open space, and safety. In addition to those components required by State law, the Clovis General Plan also contains optional elements, including Environmental Safety, Economic Development, Public Facilities and Services, and Air Quality.

GENERAL PLAN

The City of Clovis General Plan includes an introduction and eight separate chapters that establish goals and policies for each given set of topics. The chapters cover all of the topics required by California State Government Code Section 65302, as well as topics of particular interest to Clovis. The General Plan structure is summarized as follows:

- **Land Use Element:** establishes the general distribution, location, and extent of future land uses and provides standards for the intensity and density of the built environment. It establishes policies to guide land use, development, and redevelopment.

- **Economic Development Element:** links land use and development to economic growth, jobs and income, and municipal revenues and expenditures.

- **Circulation Element:** determines the transportation system necessary to accommodate the planned land use and development.

- **Housing Element:** serves as the City's principal guide for housing programs and strategies to address housing needs. State law (Government Code Sections 65580-65589.8) requires that every City and County in California adopt a Housing Element as a part of its General Plan. The Housing Element must be updated every eight years and is subject to detailed statutory requirements and mandatory review by the California Department of Housing and Community Development (HCD).

- **Public Facilities and Services Element:** defines the nature and types of public facilities, services, and activities necessary to maintain a high quality of life in Clovis.

- **Environmental Safety Element:** focuses the protection of the community from environmental and man-made hazards.

- **Open Space and Conservation Element:** seeks to protect and preserve open space, productive agricultural areas, and environmental resources. This element also establishes goals for the maintenance and provision of new and existing parks.

- **Air Quality Element:** addresses the role of local land use planning in improving regional air quality.

General Plan Land Use Map

The General Plan Land Use Map portrays the ultimate uses of land in the City of Clovis through land use designations. The Land Use Map designates the Project site as Rural Residential (RR). Figure 2.0-6 in Chapter 2.0 depicts the Clovis General Plan land use designations for the Project site and the surrounding areas.

Rural Residential (RR): Very low-density residential uses and small-scale agricultural operations. Rural residential uses may be dispersed uniformly across the land or be sited so to leave more acreage for orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

General Plan Policies

The following policies of the General Plan related to land use, population and housing are applicable to the proposed Project:

- Land Use Policy 3.5: Fiscal sustainability. The City shall require establishment of community facility districts, lighting and landscaping maintenance districts, special districts, and other special funding or financing tools in conjunction with or as a condition of development, building or permit approval, or annexation or sphere of influence amendments when necessary to ensure that new development is fiscally neutral or beneficial.

- Land Use Policy 4.1: Clovis leadership. The city shall take a leadership role in the land use planning for the sphere of influence and entire Clovis General Plan Area.

- Land Use Policy 4.3: Future environmental clearance. The city shall monitor development and plan for additional environmental clearance as development levels approach those evaluated in the General Plan EIR.

- Housing Policy 1.1: Consistency analysis of the proposed project with the State Planning Law, California Complete Streets Act, and City of Clovis Development Code would be the same for both the 2035 scenario and full buildout.

- Housing Policy 1.2: Support mixed-use projects that promote and enhance the adopted goals and policies of the Clovis General Plan.

- Housing Policy 1.3: Encourage and participate in efforts designed to achieve economies and efficiencies that will facilitate the production of quality, affordable housing.

- Housing Policy 1.4: Promote balanced, orderly growth to minimize unnecessary development costs adding to the cost of housing.
- Housing Policy 2.3: Encourage a diversity of housing types in mixed-use areas, village centers, and other areas in the City to support the Clovis community values.
- Housing Policy 4.3: Encourage development of sound new housing on vacant land within existing neighborhoods that have the necessary service infrastructure.
- Housing Policy 4.4: Support and encourage all public and private efforts to rehabilitate and improve the existing stock, including use of federal, state, and local programs for this purpose.
- Housing Policy 4.5: Promote public awareness of the need for housing and neighborhood conservation.
- Housing Policy 4.9: Encourage available public and private housing rehabilitation assistance programs in neighborhoods where such action is needed to ensure preservation of the living environment.
- Housing Policy 4.10: Manage neighborhood environmental factors to focus on neighborhood preservation and stabilization.
- Economic Development Policy 1.2: Jobs-housing ratio. Improve the City's job-housing ratio by promoting growth in jobs suited to the skills and education of current and future residents with the objective of the number of jobs in Clovis being equal to the number of employed residents.

City of Clovis Municipal Code, Title 9 – Development Code

The City's Development Code implements the policies of the Clovis General Plan and applicable specific plans by classifying and regulating the uses of land and structures within the City of Clovis. This Development Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the City.

ZONING MAP

The Zoning Map identifies zoning districts within the City at the parcel level. The Zoning Map does not designate the Project site because the site is not located within the City limits.

County of Fresno General Plan

The Fresno County General Plan is a policy guide for physical and economic growth of the County. Unincorporated land located within the Project site is currently under the jurisdiction of the County. Figure 2.0-8 in Chapter 2.0 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area. The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map. The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map.

Fresno County Municipal Code, Division VI – Zoning Division

The purpose of the Zoning Division is to classify and regulate the highest and best use of buildings, structures, and land located in the unincorporated area of the County of Fresno in a manner consistent with the Fresno County General Plan. This Division incorporates zoning regulations implementing the Fresno County General Plan and all of its elements, including the Fresno County Open Space Plan.

ZONING MAP

The Zoning Map identifies zoning districts within the County at the parcel level. Figure 2.0-7 identifies the Fresno County zoning for the Project site and the surrounding area. The Development Area is zoned AL-20 (Limited Agricultural) by the County. The Non-Development Area is zoned RR (Rural Residential) by the County.

Below is a general description of County zoning within the Project site.

AL-20 (Limited Agricultural): The "AL" District is a limited agricultural district. It is intended to protect the general welfare of the agricultural community by limiting intensive uses in agricultural areas where such uses may be incompatible with, or injurious to, other less intensive agricultural operations. The District is also intended to reserve and hold certain lands for future urban use by permitting limited agriculture and by regulating those more intensive agricultural uses which, by their nature, may be injurious to non-agricultural uses in the vicinity or inconsistent with the express purpose of reservation for future urban use. The "AL" District shall be accompanied by an acreage designation which establishes the minimum size lot that may be created within the District. Acreage designation of 640, 320, 160, 80, 40, and 20 are provided for this purpose. Parcel size regulation is deemed necessary to carry out the intent of this District.

RR (Rural Residential): The "R-R" District is intended to create or preserve rural or very large lot residential homesites where a limited range of agricultural activities may be conducted. The "R-R" District is intended to be applied to areas designated as Rural Residential by the General Plan. The minimum lot size that may be created within the "R-R" District without a special acreage designation shall be two acres. The "R-R" District accompanied by the acreage designation of five establishes that the minimum lot size that may be created within the District shall be five acres.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on land use, population, or housing if it will:

- Physically divide an established community;
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;

- Induce substantial unplanned 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); or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: The proposed Project would not physically divide an established community. (No Impact)

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have **no impact** with regard to the physical division of an established community.

Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect. (Less than Significant)

Land use plans, policies, and regulations that govern the land uses on the Project site and have jurisdiction over the Project include the Fresno County General Plan, Fresno County Municipal Code, Clovis General Plan, Clovis Municipal Code, and the Fresno LAFCo Policies and Procedures for Annexation and Detachment.

FRESNO COUNTY GENERAL PLAN AND FRESNO COUNTY MUNICIPAL CODE

As noted previously, the Project site is currently within Fresno County and not within the City of Clovis' Sphere of Influence. The Fresno County General Plan and Fresno County Municipal Code are the current governing documents for the Project site.

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This acreage includes the Development Area. Figure 2.0-8 illustrates the Sphere of Influence Expansion and Annexation Area. Upon annexation of the Development Area, the Fresno County General Plan and Fresno County Municipal Code would not apply to the Development Area.

CITY OF CLOVIS GENERAL PLAN

Since general plans often contain numerous policies emphasizing differing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the project appears to be inconsistent or arguably inconsistent with some individual policies. (Sequoyah Hills Homeowners Association v. City of Oakland (1993) 23 Cal.App.4th 704, 719.) The Project is consistent with the key land use issues and development concepts of the Clovis General Plan, which provide for logical growth of the City, emphasize community form, scale, and identify, encourage attractive, sustainable neighborhoods, support public transit and bicycle and pedestrian circulation, encourage housing opportunity, promote employment and economic development, encourage a mix of land uses that balance public services and fiscal sustainability, and promote access to open space. The Project is located adjacent to the City of Clovis' Sphere of Influence and current City limits, and will provide for housing opportunities.

When land uses are not consistent with a General Plan, there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. The proposed Project will require a General Plan Land Use Amendment to adjust the land use designation from Low Density (L) to Medium High Density (MH) for the Development Area to accommodate the proposed development density. The proposed General Plan land use designation for the Development Area is shown on Figure 2.0-8. Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Clovis General Plan land use requirements.

Additionally, the proposed Project is generally consistent with the vast majority of the applicable General Plan policies, which aim to avoid or mitigate an environmental effect. As shown in Table 3.10-3, the Project is consistent with the City's existing General Plan policies and would not conflict with policies adopted to avoid or mitigate an environmental effect.

TABLE 3.10-3: GENERAL PLAN EXISTING POLICY CONSISTENCY

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
LAND USE ELEMENT	
LU-Policy 3.6: Mix of housing types and sizes. Development is encouraged to provide a mix of housing types, unit sizes, and densities at the block level. To accomplish this, individual projects five acres or larger may be developed at densities equivalent to one designation higher or lower than the assigned designation, provided that the density across an individual project remains consistent with the General Plan.	**Consistent.** One of the proposed Project's main objectives is to "Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand." As discussed in Chapter 2.0, Project Description, the proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles.
LU-Policy 6.1: Amendment criteria. The City Council may approve amendments to the General Plan when the City Council is	**Consistent.** The proposed Project will require a General Plan Land Use Amendment to adjust the land use from Low Density (L) to Medium High Density (MH) for the Development Area to accommodate the proposed

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
satisfied that the following conditions are met: A. The proposed change is and will be fiscally neutral or positive. B. The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development. C. The proposed change is consistent with the Urban Village Neighborhood Concept when within an Urban Center. D. General Plan amendments proposing a change from industrial, mixed-use business campus, or office (employment generating) land use designations to non-employment-generating land use designation shall be accompanied by an analysis of the potential impacts on the City's current and long-term jobs-housing ratio, as well as an evaluation on the change or loss in the types of jobs. E. This policy does not apply to: i. County designations within the Clovis Planning Area or changes made by the City Council outside of the sphere boundary to reflect changes made by the County of Fresno. ii. Changes initiated by public agencies (such as school districts, flood control) for use by public agencies. iii. Changes initiated by the City within a specific plan.	development density. The MH designation identifies areas appropriate small lot single-family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre. The proposed General Plan land use designation for the Development Area is shown on Figure 2.0-8 in Chapter 2.0. The proposed Project would be fiscally positive as the proposed residences would be subject to property tax, and the future residents of the Project would participate in the local job market and economy, thus providing sales tax revenue. As discussed in Section 3.12, Public Services and Recreation, all impacts related to this topic would be less than significant. It is also noted that the Project site is not within an Urban Center, as shown in Figure LU-3 of the City's General Plan.
CIRCULATION ELEMENT	
CIR-Policy 1.3: Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.	**Consistent.** The proposed Project includes a hierarchy of roadways to accommodate the capacity needs of the existing street network. The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. Sidewalks will also be included per the City standards. The City's roadway and sidewalk standards ensure that all potential users, including children, seniors, and persons with disabilities, are accommodated.
CIR-Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.	**Consistent.** The proposed Project is not considered an infill development. However, the site has many infill characteristics, including underutilized lands within existing development patterns. The Project site is designated for residential uses by the City's General Plan Land Use Map.

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	While the proposed Project is not located near a job center, commercial areas and services are in the Project vicinity.
CIR-Policy 1.5: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).	**Consistent.** The proposed transportation network provides multimodal access and connects to adjacent developments via proposed roadways in the north, south, east, and west portions of the site. Sidewalks will also be included per the City standards.
CIR-Policy 1.6: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed transportation network utilizes a modified-grid street pattern with block lengths within 200 to 600 feet (depending on the location).
CIR-Policy 1.8: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed transportation street extends sub streets planned and/or existing to adjacent streets. For example, the northern portion of the Project includes an extension of an existing roadway that connects to the residential uses to the north, Perrin Road.
CIR-Policy 2.1: Level of service. The following is the City's level of service (LOS) standards: A. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hours B. Allow exceptions on a case-by-case basis where lower levels of service would result in other public benefits, such as: i. Preserving agriculture or open space land; ii. Preserving the rural/historic character of a neighborhood; iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts; iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders; v. Where right-of-way constraints would make capacity expansion infeasible.	**Consistent.** As discussed in Section 3.13, Transportation and Circulation, the existing General Plan includes a policy within the Transportation Element which requires maintenance of a level of service (LOS) D standard on City roadways, with some exceptions. Because LOS is no longer a CEQA significance metric, an analysis of LOS is provided for the purposes of policy consistency analysis. Chapters 8 and 9 of the Transportation Impact Analysis, included in Appendix I, discuss the LOS analysis for the Project. Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. Table 9-A of Appendix E summarizes the recommended improvements for study intersections for all analysis scenarios. Tables 9-B, 9-C, and 9-D of Appendix E summarize the post-improvement intersection LOS under existing, near- term, and cumulative conditions, respectively. Table 9-E of Appendix E summarizes the recommended improvements for roadway segments for all analysis scenarios. Tables 9-F and 9-G of Appendix E summarize the post-improvement roadway segment LOS under near- term and cumulative conditions, respectively.
CIR-Policy 2.2: Fair share costs. New development shall pay its fair share of the cost for circulation improvements in accordance with the City's traffic fee mitigation program.	**Consistent.** As discussed in Section 3.13, with recommended improvements described in Chapters 8 and 9 of the Transportation Analysis Report (provided in Appendix I of this EIR), all intersections would operate at LOS D or better with the addition of project trips. Furthermore, in the absence of a fee program where the project has an impact

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	on the roadway network, the project will pay its respective fair share for the proposed improvements.
CIR-Policy 3.1: Traffic calming. Employ traffic-calming measures in new developments and existing neighborhoods to control traffic speeds and maintain safety.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed Project includes traffic-calming measures, such as traffic circles, curb bulbouts, and center roadway pedestrian refuges.
CIR-Policy 3.4: Road diets. Minimize roadway width as feasible to serve adjacent neighborhoods while maintaining sufficient space for public safety services.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed Project includes private streets with minimized widths (37.2-feet-wide). Modified curbs for emergency vehicles are provided on the private streets.
CIR-Policy 3.6: Soundwalls. Design roadway networks to disperse traffic to minimize traffic levels. Discourage soundwalls along new collector and local streets when feasible.	**Consistent.** The proposed transportation network utilizes a modified-grid street pattern to disperse traffic and traffic noise. As discussed in Section 3.11, Noise, to meet the exterior residential standards, the unshielded residential private yards within 100 feet of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6-foot sound walls. These soundwalls are not included as part of the Project, and the Project discourages soundwalls. However, as determined by the Project-specific noise analysis, soundwalls are required in certain cases. See Mitigation Measures 3.11-3 and 3.11-4 in Section 3.11 for the sound wall mitigation requirements discussed above.
CIR-Policy 3.7: Conflict points. Minimize the number of and enhance safety at vehicular, pedestrian, and bicycle conflict points.	**Consistent.** As discussed in Section 3.13, the proposed Project will construct sidewalks on internal streets, providing adequate connections to and throughout the site for pedestrians. The Project proposes to provide pedestrian improvements/sidewalks both internal to the project site and along the Project frontage. The project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class II Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Additionally, the Project would not conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities, as discussed in Impact 3.13-2. The City's General Plan and Active Transportation Plan aim to reduce conflicts between vehicular, pedestrian, and bicycle users.
CIR-Policy 3.8: Access management. Minimize access points and curb cuts along arterials and prohibit them within 200 feet of	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), North Sunnyside Avenue and East Shepherd Avenue are the main arterial roadways providing access to

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
an intersection where possible. Eliminate and/or consolidate driveways when new development occurs or when traffic operation or safety warrants.	the Development Area. The accesses to the site from these main arterial roadways are consolidated to one access at each roadway.
CIR-Policy 3.10: Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.	**Consistent.** The Project does not include and is not located at any signalized intersections.
CIR-Policy 3.11: Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.	**Consistent.** The Project will include visual components that will enhance the appearance of the neighborhood once developed. These improvements include landscaping improvements like new street trees and other neighborhood greenery. The Project also includes pedestrian paths to encourage non-motorized transportation. Additionally, in order to reduce the visual impacts of the development, development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, as described above, which includes design standards. The design standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining an aesthetic feel similar to that of the surrounding uses.
CIR-Policy 3.12: Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets and encourage pedestrian and bicycle access.	**Consistent.** The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. The residences would be oriented facing the internal roadway system.
CIR-Policy 5.1: Complete-street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety, consistent with the Bicycle Transportation Master Plan and other master plans.	**Consistent.** As discussed in Section 3.13, the Project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class II Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Similar to pedestrian facilities, these bicycle design features included in the Project can encourage increase active transportation mode share in the area. As such, the existing streets along the western and southern boundaries would be upgraded as part of the Project. Further, the Project

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	includes new streets internal to the site, which would also have bicycle and pedestrian facilities.
CIR-Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.	**Consistent.** As discussed previously, the Project would fund and construct bicycle improvements along existing and proposed roadways. The Project proposes to construct bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. The improvements are consistent with the City's Active Transportation Plan, which supersedes the Bicycle Transportation Plan.
CIR-Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.	**Consistent.** As discussed previously, the Project would provide pedestrian facilities on-site and on the adjacent roadways. These proposed facilities would provide internal connectivity and connectivity to adjacent off-site uses.
AIR QUALITY ELEMENT	
AIR-Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.	**Consistent.** As discussed previously, the Project includes well-designed pedestrian and bicycle systems. These systems would help reduce mobile GHG emissions by reducing vehicle-miles-traveled (VMT). Beyond the proposed improvements, as required by Mitigation Measure 3.13-1 in Section 3.13 of the Draft EIR, the applicant would be required to implement measures, which are identified in the California Air Pollution Control Officers Association's (CAPCOA) Draft Handbook for Analyzing GHG Emission Reductions, assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook). Many of the strategies listed in this mitigation measure pertain to transit, pedestrian, and bicycle systems.
AIR-Policy 1.2: Sensitive Land Uses. Prohibit, without sufficient mitigation, the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board.	**Consistent.** As discussed in Impact 3.3-4 in Section 3.3, Air Quality, of the Draft EIR, the California Air Resources Board (CARB) published the Air Quality and Land Use Handbook: A Community Health Perspective (CARB, 2005) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. Residences are proposed as part of the Project, which are considered traditional sensitive receptors. However, the residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, since the proposed Project would not site land uses that would generate a significant risk of public exposure to TACs, the proposed Project would have a less than significant impact relative to this topic.

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
AIR-Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).	**Consistent.** As discussed in Section 3.3, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the mitigation measures provided by the SJVAPCD for construction-related PM10 emissions, including those provided in Mitigation Measures 3.3-1 through 3.3-4.
AIR-Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.	**Consistent.** The Project includes greenspace and landscaping which would include planting of trees. These trees would provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
ENVIRONMENTAL SAFETY ELEMENT	
ES-Policy 1.1: Flood Zone - Prohibit development within the 100-year flood zone and dam inundation areas unless adequate mitigation is provided against flood hazards. Participate in the National Flood Insurance Program.	**Consistent.** As shown on Figure 3.9-2 in Section 3.9, Hydrology and Water Quality, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. The area under the 100-year flood designation will undergo a Letter of Map Revision (LOMR) process with FEMA, whereby the grading design will elevate the first floor of any structure one foot above the flood elevation. This process is an engineering level process that is performed during the preparation of grading and improvement plans. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway
ES-Policy 1.3: Geologic and seismic risk. Prohibit development on unstable terrain, excessively steep slopes, and other areas deemed hazardous due to geologic and seismic hazards, unless acceptable mitigation measures are implemented. Require that underground utilities be designed to withstand seismic forces and accommodate ground settlement.	**Consistent.** As discussed in Section 3.6 Geology and Soils, some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements. Additionally, the Project site is subject to potential ground shaking caused by seismic activity. Seismic activity could come from a known active fault, such as the Clovis fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.6.2 Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these requirements, which have been adopted by the City of Clovis (Chapter 8.1), include design standards and requirements that are intended to

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	minimize impacts to structures in seismically active areas of California. Section 1613 of the California Building Code specifically provides structural design standards for earthquake loads. Further, the Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent.
ES-Policy 2.1: Safe storage and maintenance. The use and storage of hazardous materials shall comply with applicable federal, state, and local laws to prevent and mitigate hazardous materials releases.	**Consistent.** As discussed in Section 3.8, Hazards and Hazardous Materials, the proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. The Project would be subject to regulations pertaining to the transport and use of hazardous materials. For example, hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Additionally, these residential hazardous materials would be stored and handled in accordance with best management practices approved by Fresno County Department of Community Health, Environmental Health System (FCEHS) and the Clovis Fire Department.
ES-Policy 3.11: Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.	**Consistent.** As discussed in Section 3.8, there are no documented public airports or public use airports within close proximity to the Project site. The nearest airport facility within the vicinity of the Project site is the Fresno Yosemite International Airport, located approximately six miles south. The Project site is not located within the airport influence area or within the Airport's noise exposure contours for the Fresno Yosemite International Airport as identified in the Airport Land Use Compatibility Plan (ALUCP).
OPEN SPACE AND CONSERVATION ELEMENT	
OSC-Policy 1.1: Parkland standard. Provide a minimum of 4 acres of public parkland for every 1,000 residents.	**Consistent.** As discussed in Section 3.12, Public Services and Recreation, the Project proposes to include approximately 5.54 acres of open space, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.04, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.
OSC-Policy 1.3: New parks and recreation facilities. Provide a variety of parks and recreation facilities in underserved and growing areas of the community.	**Consistent.** As noted above, the Project would provide approximately 5.54 acres of open space, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project would also be subject to the City's Park Acquisition and Development fee. These fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update.
OSC-Policy 1.8: Funding. Require new development to provide pocket and neighborhood parks, dedicate land for area parks, and pay impact fees for community and regional parks. Require new development to establish lighting and landscape maintenance districts to fund operations and maintenance.	**Consistent.** As noted above, the Project would provide greenspace and would pay impact fees for community and regional parks.
OSC-Policy 2.2: New development. Encourage new development to incorporate on-site natural resources and low impact development techniques.	**Consistent.** The natural resources on the Project site (i.e., limited agricultural habitat for some animal species) would be converted by the Project, however the project will include trees and greenspace to provide new resources. However, the Project includes low impact development techniques and implementation of best management practices, such as the proposed stormwater drainage system.
OSC-Policy 2.3: Visual resources. Maintain public views of open spaces, parks, and natural features. Enhance views along roadways and trails. Preserve Clovis' viewshed of the surrounding foothills and orient new development to capitalize on views of the Sierra Nevada.	**Consistent.** As discussed in Section 3.1, Aesthetics and Visual Resources, Policy 2.3 of the Clovis General Plan Update's Open Space and Conservation Element gives substantial consideration to the preservation of scenic vistas, corridors, and scenic resources, such as maintaining public views of open spaces, parks, and natural features; enhancing views along roadways and trails; preserving Clovis' viewshed of the surrounding foothills; and orienting new development to capitalize on views of the Sierra Nevada. Chapter 9 of the Clovis Development Code also establishes requirements for fences, walls, and hedges to ensure that these elements minimize screening of scenic

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	views and sunlight by outlining provisions such as height limitations, design and construction materials, site plan review requirements, allowable fencing materials, etc. per Section 9.24.060 (Fences, Walls, and Hedges); and screening and buffering requirements of adjoining land uses, utility equipment, and refuse areas are detailed in Section 9.24.090 (Screening and Buffering). Development in accordance to these code requirements would ensure that the implantation of the proposed project would not have a substantial adverse impact on scenic vistas, corridors, or resources in the City of Clovis to the greatest extent feasible.
OSC-Policy 2.5: Right to farm. Support, encourage, and protect agricultural operations within Clovis and recognize their right to farm.	**Consistent.** As discussed in Impact 3.2-3 of Section 3.2, Agricultural Resources, there is no immediately adjacent agricultural land that poses a potential for conflict. The City's General Plan anticipates that some agricultural lands within the City's Planning Area would ultimately develop with urban uses. The City has a Right to Farm Ordinance that is intended to reduce the occurrence of any conflict between nonagricultural and agricultural land uses within the City through requiring the transferor of any property in the City to provide a disclosure statement describing that the City permits agricultural operations, including those that utilize chemical fertilizers and pesticides.
OSC-Policy 2.6: Biological resources. Support the protection of biological resources through the conservation of high-quality habitat area.	**Consistent.** High quality habitat is not found on-site. The Project site contains limited habitat for special-status plant and animal species. In the cases where low or moderate quality habitat exists for some species, mitigation measures are included in Section 3.4, Biological Resources, of the Draft EIR.
OSC-Policy 3.1: Stormwater management. Encourage the use of low impact development techniques that retain or mimic natural features for stormwater management.	**Consistent.** As noted previously, the Project includes low impact development techniques and implementation of best management practices, such as the proposed stormwater drainage system.
OSC-Policy 3.2: Stormwater pollution. Minimize the use of non-point source pollutants and stormwater runoff.	**Consistent.** As noted previously, the Project includes low impact development techniques and implementation of best management practices, such as the proposed stormwater drainage system. As discussed in Section 3.9, Hydrology and Water Quality,
OSC-Policy 3.4: Drought-tolerant landscaping. Promote water conservation through the use of drought-tolerant landscaping on existing and new residential properties. Require drought-tolerant landscaping for all new commercial and industrial development and city-maintained landscaping, unless used for recreation purposes	**Consistent.** The Project includes landscaping and greenspace, which would be subject to the City's Water Efficient Landscape Requirements set forth in the City's Municipal Code.
NOISE ELEMENT	

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
NOI-Policy 3.1: Land use compatibility. Approve development and require mitigation measures to ensure existing and future land use compatibility as shown in the Noise Level Exposure and Land Use Compatibility Matrix and the City's noise ordinance.	**Consistent.** Section 3.11, Noise, of the Draft EIR includes analysis of the potential noise impacts which may result from the Project. Impacts related to operational noise, construction noise, and cumulative noise would be less-than-significant with mitigation included in Section 3.11. Impacts related to excessive groundborne vibration, groundborne noise levels, and airport noise would be less than significant.
NOI-Policy 3.2: Land use and traffic patterns. Discourage land use and traffic patterns that would expose sensitive land uses or noise-sensitive areas to unacceptable noise levels.	**Consistent.** As discussed above, with mitigation, sensitive land uses or noise sensitive areas would not be exposed to unacceptable noise levels.
NOI-Policy 3.3: New residential. When new residential development is proposed adjacent to land designated for industrial or commercial uses, require the proposed development to assess potential noise impacts and fund feasible noise-related mitigation measures.	**Consistent.** Land designated for General Commercial (GC) uses is located at the southwest corner of E. Shepherd Avenue and North Fowler Avenue, near the southeastern corner of the Project site. This GC area includes developed commercial uses, such as the Clovis Meat Market, Me n Ed's Pizzeria, and Ivory Bridal Boutique. As discussed above, with mitigation, sensitive land uses or noise sensitive areas would not be exposed to unacceptable noise levels. These noise-related mitigation measures would be implemented and funded by the Project applicant.
NOI-Policy 3.4: Acoustical study. Require an acoustical study for proposed projects that have the potential to exceed acceptable noise thresholds or are exposed to existing or future noise levels in excess of the thresholds in the City's noise ordinance.	**Consistent.** A Noise Impact Study has been prepared by MD Acoustics for the Shepherd North Project and is included in Appendix H. The results of the study are included in Section 3.11, Noise, of the Draft EIR.
NOI-Policy 3.5: Site and building design. Minimize noise impacts by requiring appropriate site, circulation, equipment, and building design, and sound walls, landscaping, and other buffers.	**Consistent.** The Project is located in an area surrounded by existing residential development and, as such, is appropriately located. Additionally, the proposed transportation network utilizes a modified-grid street pattern to disperse traffic and traffic noise. Sound walls would also be required, as necessary, via mitigation measures in Section 3.11. The Project also includes landscaping and greenspace.
NOI-Policy 3.11: Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.	**Consistent.** As discussed in Section 3.8, there are no documented public airports or public use airports within close proximity to the Project site. The nearest airport facility within the vicinity of the Project site is the Fresno Yosemite International Airport, located approximately six miles south. The Project site is not located within the airport influence area or within the Airport's noise exposure contours for the Fresno Yosemite International Airport as identified in the ALUCP.
NOI-Policy 3.14: Control sound at the source. Prioritize using noise mitigation measures to control sound at the source before buffers, soundwalls, and other perimeter measures.	**Consistent.** Section 3.11, Noise, includes the following mitigation measures which require various noise controls (upgraded residential glass and sound walls) to control sound at the source:

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	• Mitigation Measure 3.11-3: A 6-foot-tall barrier shall be constructed along the south boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue, in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department. • Mitigation Measure 3.11-4: The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.
PUBLIC FACILITIES AND SERVICES ELEMENT	
PFS-Policy 1.1: New development. New development shall pay its fair share of public facility and infrastructure improvements.	**Consistent.** As discussed in Section 3.12, the Project would be required to pay the police facility fee in accordance with Clovis Municipal Code Chapter 4.11, Police Department Fees. Additionally, the Project would be required to pay the community facility fee in accordance with Clovis Municipal Code Chapter 4.10, Fire Facility Development Impact Fee. Further, the Project would be required to pay the school impact fees in accordance with Education Code Section 17620 and Government Code Section 65995. Lastly, the Project would be subject to development impact fees, library fees, and parkland fees, as required by Chapter 3.10, Development Impact Fees, Chapter 7.8, Library Facilities Development Impact Fees, and Chapter 3.04, Park Acquisition and Development, of the City's Municipal Code.

SOURCE: DE NOVO PLANNING GROUP, 2023.

Overall, the proposed Project would have a **less than significant** impact relative to the General Plan.

CLOVIS ZONING CODE

The Clovis Zoning Code implements the General Plan. The Project site is currently within the jurisdiction of Fresno County. The Fresno LAFCo will require the Project site to be pre-zoned by the City of Clovis in conjunction with the proposed annexation. The pre-zoning request is for R-1-PRD zoning designation over these lots.

- Single-Family Planned Residential Development Zoning (R-1-PRD). This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designation of the General Plan.

The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9.

The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The zoning ordinance establishes permitted uses, development densities and intensities, and development standards for each zone to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to any activities on the Project site. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code and will have a **less than significant** impact relative to this topic.

FRESNO LAFCO

The Project site is currently in an unincorporated portion of Fresno County, adjacent to the City of Clovis City limits, outside the Clovis SOI (as defined in the Clovis General Plan). The proposed Project requires annexation of 77 acres of the Project site into the City limits.

LAFCo is serving as a responsible agency for this EIR pursuant to their Annexation Policies and Procedures. When LAFCo is a Responsible Agency under CEQA, in order to approve the annexation, the Commission will certify that it has reviewed the Lead Agency's environmental documents and, if required, adopt findings for approval and statements of overriding considerations in accordance with Sections 15091 and 15903 of the CEQA Guidelines.

The Fresno LAFCo will review the proposed annexation for consistency with the Annexation Policies and Procedures. These policies and procedures govern Fresno LAFCo determinations regarding annexations to all agencies. The following policies will be reviewed as part of the annexation process by the Fresno LAFCo.

1. The annexation program is consistent with LAFCo's Sphere of influence (SOI) for the City.

Suggested actions:

- City and county shall reach agreement on development standards and planning and zoning requirements within the sphere to ensure that development within the sphere occurs in a

manner that reflects the concerns of the affected City and is accomplished in a manner that promotes the logical and orderly development of areas within the sphere. GC §56425

- City responds to a request to extend service outside of its City limits and SOIs in consultation with GC §56133 and Fresno LAFCo policy.

Project discussion:

The proposed Project includes an amendment of the City's SOI to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno LAFCo. The SOI amendment would be reviewed by the City and LAFCo prior to proceeding with the requested annexation. If the SOI Amendment is approved, the Project would then be able to begin the annexation process.

2. The annexation program clearly implements the City's general plan.

Suggested actions:

- City annexation applications shall describe how the proposal implements the City's general plan, and support these statements with information from other official sources such as the annual budget, capital improvement plan, and so forth.
- A prezoning ordinance shall not be encumbered with extraneous conditions that preclude the ordinance's effective date by the time of LAFCo hearing on the annexation.

Project discussion:

The proposed Project includes the adoption of pre-zoning for the proposed annexation area, which will serve to regulate the uses of land and structures within the Project area. The Project site is currently located outside of the Clovis City limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Use designation). The pre-zoning request is for Single-Family Planned Residential Development Zoning (R-1-PRD) zoning designation over the Development Area lots. The R-1-PRD district is consistent with the proposed Medium-High Density Residential land use designation of the General Plan. The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9. The Project will be subject to the development standards as described in the Municipal Code. The Municipal Code is proposed to ensure consistency between land use and zoning designations.

3. The annexation program emphasizes the use of cities' resolution of application versus property owner/registered voter petitions.

Suggested action:

- For the City to consider opposing property owner petition-initiated reorganizations as these would not have proceeded through the process of City development review and approval, which is an important step in the management of a City's general plan.

Project discussion:

No opposing property owner petition-initiated reorganizations exist for this Project.

4. The annexation program supports orderly growth by identifying areas to be annexed, general time frames for growth, and a plan for extension of services to these areas.

Suggested actions:

- Capital improvement plan and/or facilities plans include all lands within the SOI;
- Development impact fees that fund the extension of services are established and maintained;
- Impacts to service delivery are assessed in the City's EIR or project-specific CEQA documents and appropriately-scaled mitigation is approved and implemented.
- The City coordinates its public policy documents in support of the annexation program.

Project discussion:

The Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan.

5. The annexation program anticipates changes of organization of existing service districts and service areas in the SOI or adjacent to the SOI.

Suggested action:

- The Program should describe the transition of services that will occur when the City annexes/detaches (CID, NCFPD, FCFPD, KRCD, etc.); inversely, the document describes the status of or continuation of services when annexations do not result in detachment (FID, FMFCD, etc.).

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan.

6. The annexation program anticipates the location of Disadvantaged Unincorporated Communities within a City's sphere of influence.

Suggested action:

- Cities should become proficient in implementing their responsibilities under Senate Bill 244, should review Fresno LAFCo DUC policy and review Senate Bill 244 Technical Advisory.

Project discussion:

The Project site is not located in or adjacent to a Disadvantaged Unincorporated Communities.

7. The annexation program informs citizens in annexation areas of their rights, benefits, and changes that will occur on annexation.

Suggested actions:

- City to establish and maintain on its website a description of the information above, how citizens can engage the process, how the City engages citizens and stakeholders and other information related to annexation. This information should include a description of the SOI, protest processes, and how LAFCo is involved.
- For those portions of a City's SOI that contain a large number of rural residential parcels that are planned for urban uses, the City is strongly encouraged to develop a long-term plan to annex and serve these areas.

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan. It is noted, however, the proposed annexation area was not included in the City's latest Municipal Service Review.

8. The annexation program will be coordinated with LAFCo's Municipal Services Review (MSR) for the City.

Suggested action:

- City applications should include an assessment of current MSR determinations and recommendations.

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan. It is noted, however, the proposed annexation area was not included in the City's latest Municipal Service Review.

9. The annexation program is managed by an assigned and responsible City staff member.

Suggested action:

- City identifies a staff member to serve as a genuine point of contact with LAFCo, that is, a staff member responsible and accountable for managing applications, knowledgeable of the project and of LAFCo's process, and empowered to facilitate the City's annexation program.

Project discussion:

This requirement applies to the City and not individual development projects.

H10. City entitlement analysis is integrated with LAFCo policies

Suggested action:

- Local agencies, including Fresno County, are strongly advised to include Fresno LAFCo in their initial request for comments.
- When initial planning applications that will eventually require annexation are submitted to cities, they are encouraged to submit a pre-application to LAFCo so that LAFCo can track the project at its beginning and provide comments that would facilitate annexation in time for these to be considered in a timely and efficient manner.

Project discussion:

This City has coordinated with LAFCo through the release of the Notice of Preparation and invitation to the Scoping meeting. The City will ultimately coordinate with LAFCo if the City decides that the Project site should be annexed into the City of Clovis. At that time, the City would submit the appropriate applications and documentations for LAFCo's consideration of the City's annexation approval.

The policies discussed above are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an update to the *Clovis Municipal Service Review* in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts. As such, implementation of the proposed Project will have a **less than significant** impact relative to this topic.

Impact 3.10-3: The proposed Project would not induce substantial population growth in an area. (Less than Significant)

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a 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…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

Based on the CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the project. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342). Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply or wastewater treatment/collection in an area where this service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

Components of Growth: The timing, magnitude, and location of land development and population growth in a region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California. It is noted that the City of Clovis Housing Element specifically mentions the Project site for residential development, which means that the growth is consistent with anticipated growth for the City.

GROWTH EFFECTS OF THE PROJECT

Direct Population Growth: The proposed Project proposes housing that would result in direct population growth. The proposed Project includes the addition of 605 residential units. Using the most recent Department of Finance (2022) estimate for the average number of persons residing in a dwelling unit in the City of Clovis of 2.81, the addition of 605 housing units could increase the population of the City by an estimated 1,700 persons.

The proposed Project will require a General Plan Land Use Amendment to adjust the land use from Rural Residential (RR) for the Development Area to accommodate the proposed development density. The proposed General Plan land use designation for the Project site is shown on Figure 2.0-8 in Chapter 2.0.

Indirect Population Growth: Projects that include employment generating uses have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. As noted in Chapter 2.0, Project Description, the proposed Project does not include the development of employment generating uses within the Development Area. In addition, the proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a **less than significant** impact relative to this topic.

Impact 3.10-4: The proposed Project would not displace substantial numbers of people or existing housing. (No Impact)

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards). Development of the Project would add 605 residential units. Therefore, because no housing is located in the Development Area, the proposed Project would not displace substantial numbers of people or existing housing. The proposed Project will have **no impact** related to the displacement of substantial numbers of people or existing housing.

This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts. A Noise Impact Study has been prepared by MD Acoustics for the Shephard North Project and is included in Appendix H.

There were no comments received during the NOP scoping process related to this environmental topic.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response. A-weighted dB values are expressed as dBA.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dB) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dB is generally perceived as a doubling in loudness. For example, a 70-dB sound is half as loud as an 80-dB sound, and twice as loud as a 60-dB sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn}, but includes

a +5-dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	*NOISE LEVEL (DB)*	*COMMON INDOOR ACTIVITIES*
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dB change cannot be perceived;
- 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 human response would be expected; and
- A 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project Vicinity, three 15-min ambient noise measurements were conducted at or near the Project site. The noise measurements were taken to determine the existing ambient noise levels. Noise data indicates that traffic along Shepherd Avenue is the primary source of noise impacting the Project site and the adjacent uses. The results of the short-term noise data are presented in Table 3.11-2. Appendix H shows the complete results of the noise monitoring survey.

The sound level meters were programmed to collect hourly noise level intervals at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

TABLE 3.11-2: EXISTING SHORT-TERM NOISE MEASUREMENT DATA

DATE	*TIME*	*AVERAGE MEASURED HOURLY NOISE LEVELS, DB(A)*							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
12/20/2022	7:53AM-8:08AM	46.4	68.0	38.0	53.3	46.9	45.2	43.9	41.6
12/20/2022	8:27AM-8:42AM	69.1	82.2	55.7	77.4	72.0	68.7	66.4	62.6
12/20/2022	9:01AM-9:16AM	46.0	63.5	34.5	56.8	48.8	39.4	37.3	35.6

SOURCE: MD ACOUSTICS, 2023.

Noise data shown in Table 3.11-2 above indicates the ambient noise level ranged from 46 to 69 dBA Leq at the Project site. Maximum levels reached up to 82 dBA at location 2 as a result of traffic of heavy trucks along Shepherd Avenue.

Construction Vibration

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

Table 3.11-3 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

TABLE 3.11-3: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

EQUIPMENT	*PEAK PARTICLE VELOCITY (INCHES/SECOND) AT 25 FEET*	*APPROXIMATE VIBRATION LEVEL LV (DVB) AT 25 FEET*
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT, FEDERAL TRANSIT ADMINISTRATION, MAY 2006.

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 3.11-4 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

TABLE 3.11-4: GUIDELINE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

STRUCTURE AND CONDITION	*MAXIMUM PPV (IN/SEC)*	
	TRANSIENT SOURCES	*CONTINUOUS/FREQUENT INTERMITTENT SOURCES*
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

NOTES:

TRANSIENT SOURCES CREATE A SINGLE ISOLATED VIBRATION EVENT, SUCH AS BLASTING OR DROP BALLS. CONTINUOUS/FREQUENT INTERMITTENT SOURCES INCLUDE IMPACT

PILE DRIVERS, POGO-STICK COMPACTORS, CRACK-AND-SEAT EQUIPMENT, VIBRATORY PILE DRIVERS, AND VIBRATORY COMPACTION EQUIPMENT.

SOURCE: TABLE 19, TRANSPORTATION AND CONSTRUCTION VIBRATION GUIDANCE MANUAL, CALTRANS, SEPT. 2013.

3.11.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a Project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

California State Building Codes

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room.

Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for

limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

CITY OF CLOVIS

The City of Clovis General Plan

The City of Clovis General Plan Noise Element contains goals, policies, and implementation measures for assessing noise impacts within the City. Listed below are the noise goals, policies, and implementation measures that are applicable to the proposed Project:

POLICES: NOISE ELEMENT

- Policy 3.1. Land use compatibility. Approve development and require mitigation measures to ensure existing and future land use compatibility as shown in the Noise Level Exposure and Land Use Compatibility Matrix and the City's noise ordinance.
- Policy 3.2. Land use and traffic patterns. Discourage land use and traffic patterns that would expose sensitive land uses or noise-sensitive areas to unacceptable noise levels.
- Policy 3.3. New residential. When new residential development is proposed adjacent to land designated for industrial or commercial uses, require the proposed development to assess potential noise impacts and fund feasible noise-related mitigation measures.
- Policy 3.4. Acoustical study. Require an acoustical study for proposed projects that have the potential to exceed acceptable noise thresholds or are exposed to existing or future noise levels in excess of the thresholds in the City's noise ordinance.
- Policy 3.5. Site and building design. Minimize noise impacts by requiring appropriate site, circulation, equipment, and building design, and sound walls, landscaping, and other buffers.
- Policy 3.6. Noise impacts. Minimize or eliminate persistent, periodic, or impulsive noise impacts of business operations.
- Policy 3.7. Mixed-use buildings. Require that mixed-use structures be designed to prevent transfer of noise and vibration between uses.
- Policy 3.8. Existing uses. Require the use of noise abatement devices for existing uses that exceed acceptable noise thresholds.
- Policy 3.9. Caltrans facilities. Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of new highway projects or improvements to existing facilities.
- Policy 3.10. Airport changes. Coordinate with the Fresno Yosemite International Airport to minimize noise impacts on properties in Clovis due to changes in flight patterns or airport expansion.
- Policy 3.11. Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.

- Policy 3.12. Truck traffic. Plan and maintain truck routes that avoid noise-sensitive land uses and areas. Encourage business delivery areas to be located away from residential properties and to mitigate associated noise impacts.
- Policy 3.13. Small aircraft and helicopters. Minimize the noise impact of small aircraft and helicopters on residential neighborhoods.
- Policy 3.14. Control sound at the source. Prioritize using noise mitigation measures to control sound at the source before buffers, soundwalls, and other perimeter measures.

The guidelines rank noise land use compatibility in terms of clearly compatible, normally compatible, normally incompatible, and clearly incompatible as illustrated in Exhibit D [Table 3.11-5].

TABLE 3.11-5: LAND USE AND NOSIE COMPATIBILITY MATRIX

LAND USE	*ENERGY AVERAGE (CNEL)*						
	<	*55*	*60*	*65*	*70*	*75*	*80>*
Amphitheater, concert hall, auditorium, meeting hall	B	B	C	C	D	D	D
Mobile home	A	A	B	C	C	D	D
Hospital, library, school, faith/religious uses	A	A	B	C	C	D	D
Hotel, motel, transient lodging	A	A	B	B	C	C	D
Single family, multifamily, faith/religious uses	A	A	B	B	C	D	D
Parks	A	A	A	B	C	D	D
Office building, research & development, professional office, city office building, and hotel	A	A	A	B	B	C	D
Amusement park, miniature golf, go-cart track, health club, equestrian center	A	A	A	B	B	D	D
Golf courses, nature centers, cemeteries, wildlife reserves, wildlife habitat	A	A	A	A	B	C	C
Commercial retail, bank, restaurant, movie theater	A	A	A	A	B	B	C
Automobile service station, auto dealer, manufacturing, warehousing, wholesale, utilities	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

SOURCE: CITY OF CLOVIS GENERAL PLAN, NOISE ELEMENT, EXHIBIT D.

City of Clovis Municipal Code Noise Ordinance

Chapter 9.22.080 and 9.22.100 General Performance Standards of the City's Municipal Code outlines the City's noise ordinance.

9.22.080 - NOISE

The following noise standards, unless otherwise specifically indicated, shall apply to all property with a designated noise zone:

TABLE 3.11-6: MAXIMUM EXTERIOR NOISE STANDARDS

NOISE ZONE	TYPE OF LAND USE	ALLOWABLE EXTERIOR NOISE LEVEL (15-MINUTE LEQ)	
		7 A.M. TO 10 P.M.	10 P.M. TO 7 A.M.
I	Single-, two- or multiple-family residential	55 dBA	50 dBA
II	Commercial	65 dBA	60 dBA
III	Residential portions of mixed use properties	60 dBA	50 dBA
IV	Industrial or manufacturing	70 dBA	70 dBA

SOURCE: SECTION 9.22.080, CLOVIS MUNICIPAL CODE.

TABLE 3.11-7: MAXIMUM INTERIOR NOISE STANDARDS

NOISE ZONE	TYPE OF LAND USE	ALLOWABLE EXTERIOR NOISE LEVEL (15-MINUTE LEQ)	
		7 A.M. TO 10 P.M.	10 P.M. TO 7 A.M.
I	Residential	45 dBA	40 dBA
II	Administrative/professional office	50 dBA	--
III	Residential portions of mixed use properties	45 dBA	40 dBA

SOURCE: SECTION 9.22.080, CLOVIS MUNICIPAL CODE.

If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any property measured at the property line, to exceed either of the following within the incorporated area of the City:

- The noise standard for the applicable zone for any fifteen (15) minute period;
- A maximum impulsive noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response). Impulsive noise which repeats four (4) or more times in any hour between 10:00 p.m. and 7:00 a.m. shall be measured as continuous sound and meet the noise standard for the applicable zone.

When properties of two (2) different noise zones abut one another, the maximum exterior noise level shall be the lower of the two (2) noise zones where one zone is residential, and in other contexts shall be the average of the two (2) zones.

Commercial, industrial, and recreational uses which create impulsive noise as part of their regular processes, such as through the use of pile drivers, forge hammers, punch presses, and gunshots, shall not be located in any zone district adjacent to a residential zone district unless a noise study is completed demonstrating the impulsive noise does not exceed the standards at the property line for the residential zone district. Impulse noise from these uses shall be measured as continuous sound. The noise study shall be subject to review and approval by the Director or his or her designee, and shall be completed as part of any discretionary permit process for the use or prior to obtaining

a building permit. This provision shall not apply to uses existing on the effective date of the ordinance codified in this title.

Emergency electrical generators in residential zone districts shall comply with the California Building Code and California Residential Code, as amended, for the installation and operation of the emergency generator. Test cycle operation shall be limited to the hours between 10:00 a.m. and 4:00 p.m. Emergency electrical generators are intended to provide emergency power to run air conditioning, medical equipment and other household appliances in the event of a rolling blackout or other power grid failure.

Measurement of sound levels. Measurement of sound levels shall be as follows:

- Sound level meter. Sound levels shall be measured on the A-weighting network of a sound level meter meeting the requirements of ASA Standards S14-1971 for General Purpose Sound Level Meters, or the latest revision published by the American National Standards Institute, Inc., using the slow meter response. The meter shall be calibrated and used according to the manufacturer's instructions.

- Location of microphone. Measurements shall be taken with the microphone located at any point on the property line of the noise source, but no closer than three feet (3') from any wall and not less than three feet (3') above the ground.

- Minimum of two (2) readings. A minimum of two (2) readings shall be taken for a period of ten (10) minutes each with ten (10) minute intervals between measurements. The sound level shall be the average of these readings.

Activities exempt from regulations. The following activities shall be exempt from the provisions of this section:

- Emergency exemption. The emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work.

- Warning devices. Warning devices necessary for the protection of public safety, (e.g., ambulance, fire, and police sirens, and train horns).

- Railroad activities. All locomotives and rail cars operated by a railroad that is regulated by the State Public Utilities Commission.

- Federal or State pre-exempted activities. Any activity, to the extent regulation thereof has been pre-exempted by Federal or State law.

- Pre-existing uses. Uses existing at the time of the effective date of the ordinance codified in this title, which are in compliance with all applicable standards in effect prior to adoption,

and which are not otherwise operating as a nuisance in violation of Article 6 of Chapter 27 of Title 5.

- Public health and safety activities. All transportation, flood control, and utility maintenance and construction operations conducted by government entities or utility companies at any time on public rights-of-way, and those situations that may occur on private property deemed necessary to serve the best interests of the public and to protect the public's health and well-being, including, but not limited to: debris and limb removal; removal of damaged poles and vehicles; removal of downed wires; restoring electrical service; repairing traffic signals; repair of water hydrants; repair of mains, gas lines, oil lines, and sewers; repair and maintenance of flood control and storm water facilities; repair and maintenance of streets and sidewalks.

- Ordinary municipal activities. Ordinary municipal activities conducted by the City or other entity having jurisdiction in the City, including, but not limited to: solid waste collection; street sweeping; operation, maintenance, and repair of water production, treatment, and distribution facilities; operation, maintenance, and repair of sewage treatment, collection and distribution facilities; and vacuuming catch basins.

- Public safety training activities. Training activities by fire, law enforcement, and public utility officials that cannot reasonably take place within the parameters of this section, including but not limited to training that involves: hydrant testing, pumping hose lays, running chain saws, operating power tools, demolition, vehicle noise, and use of generators.

- Public celebrations. Public celebrations, holidays, or occasions generally celebrated, or public parades held under authorized permits; any sporting event or activity conducted under the direction and supervision of any public or private school.

Acts deemed violations of section. The following acts are a violation of this section:

- Noise-related nuisances defined in Chapter 27 of Title 5. Violations of Article 6 of Chapter 27 of Title 5 pertaining to unlawful noise-related nuisances shall also be considered a violation of this section.

- Construction noise. Construction activities shall be subject to the provisions of Section 5.27.604, which sets forth the permissible hours for construction activity. At all other times, no person shall operate, or cause to be operated, tools or equipment used in alteration, construction, demolition, drilling, or repair work so that the sound creates a noise disturbance across a residential property line, except for emergency work. Stationary equipment (e.g., generators) shall not be located adjacent to any existing residences unless enclosed in a noise attenuating structure, subject to the review and approval of the Director.

- Places of public entertainment. Operating, playing, or allowing the operation or playing of a drum, musical instrument, phonograph, radio, sound amplifier, television, or similar device

that produces, reproduces, or amplifies sound in a place of public entertainment at a sound level greater than ninety-five (95) dBA (read by the slow response on a sound level meter) at any point that is normally occupied by a customer is prohibited, unless conspicuous signs are located near each public entrance, stating "Warning: Sound Levels Within May Cause Hearing Impairment."

- Stationary nonemergency signaling devices. Sounding or allowing the sounding of an electronically amplified signal from a stationary bell, chime, siren, whistle, or similar device intended primarily for nonemergency purposes, from any place, for more than ten (10) consecutive seconds in any hourly period is prohibited.

- Compacting mechanisms. Operating or allowing the operation of the compacting mechanism of any motor vehicle that compacts refuse and that creates, during the compacting cycle, a sound level in excess of eighty-five (85) dBA when measured at fifty feet (50') from any point of the vehicle is prohibited between the hours of 9:00 p.m. and 5:00 a.m.

- Vehicle or motorboat repairs and testing. Repairing, rebuilding, modifying, or testing any motor vehicle, motorcycle, or motorboat in a manner as to cause a noise disturbance across property lines or within a noise-sensitive zone is prohibited.

Responsibility to eliminate or reduce acts deemed violations of section. Improvements to eliminate or reduce negative impacts between uses deemed violations of this section shall be provided by the new use, rather than the existing use. (§ 2, Ord. 14-13, eff. October 8, 2014; § 1(2) (Atts. 1, 2), Ord. 20-18, eff. February 3, 2021)

9.22.100 VIBRATIONS

Uses that generate vibrations that may be considered a nuisance or hazard on any adjacent property shall be corrected, cushioned, or isolated to prevent the continued generation of vibrations. Uses shall be operated in compliance with the following provisions.

- Not perceptible along property line. Uses shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities which generate the vibration;

- No discomfort or annoyance. Uses, activities, and processes shall not generate ground vibration that causes discomfort or annoyance to reasonable persons of normal sensitivity or which endangers the comfort, health, or peace of residents whose property abuts the property lines of the subject parcel.

- No interference. Uses shall not generate ground vibration that interferes with the operations of equipment and facilities on adjoining parcels.

- Temporary construction exempt. Vibrations from temporary construction/demolition and vehicles that leave the subject parcel (e.g., trucks) are exempt from the provisions of this section. (§ 2, Ord. 14- 13, eff. October 8, 2014).

3.11.3 IMPACTS AND MITIGATION MEASURES

STUDY METHOD AND PROCEDURE

The following section describes the noise modeling procedures and assumptions used for this noise impact assessment.

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent to the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance with the City's and Caltrans's (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5 feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawnmowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

Noise monitoring locations were selected based on the nearest sensitive receptors relative to the proposed onsite noise sources. Three (3) short-term 15-min noise measurement was conducted at or near the Project site and are illustrated in Exhibit E of Appendix H. Appendix H includes photos, a field sheet, and measured noise data.

Traffic noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes correspond to the LSA Associates, Inc. segment projections in Appendix E. It's assumed that the peak hour is 10% of the ADT. The referenced traffic data was applied to the model and is in Appendix H. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outermost travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

Table 3.11-8 indicates the vehicle distribution utilized for this study.

TABLE 3.11-8: TYPICAL NOISE LEVELS

MOTOR-VEHICLE TYPE	*DAYTIME % (7AM TO 7 PM)*	*EVENING % (7 PM TO 10 PM)*	*NIGHT % (10 PM TO 7 AM)*	*TOTAL % OF TRAFFIC FLOW*
Automobiles	75.5	14.0	10.5	97.42
Medium Trucks	48.9	2.2	48.9	1.84
Heavy Trucks	47.3	5.4	47.3	0.74

SOURCE: MD ACOUSTICS, 2023.

MD utilized segment projections from LSA Associates, Inc. obtained January 2023. The following outlines key adjustments to the REMEL for Project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor)

- Traffic noise source spectra
- Topography

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the Project site. The Project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete, and building phases of construction. The construction noise calculation output worksheet is located in Appendix H.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

Would the Project:

a. Generate 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. Generate 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?

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Operational Noise - The Proposed Project has the potential to generate 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. (Less than Significant with Mitigation)

To predict existing and cumulative noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference between with and without project conditions. In addition, the noise contours for 55, 60, 65, and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed Project on the nearby roadways

were calculated for existing, existing plus Project, cumulative 2046, and cumulative 2046 plus project scenarios.

Table 3.11-9 and 3.11-10 compare the existing and existing plus project scenario. A change of 3 dB or more is required to have a perceptible difference in noise levels.

TABLE 3.11-9: EXISTING PLUS PROJECT SCENARIO - NOISE LEVELS ALONG ROADWAYS (DBA CNEL)

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Behymer Avenue	Willow Avenue to Minnewawa Avenue	60.4	60.5	0.1
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	62.5	62.5	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	62.4	62.4	0.0
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	67.7	68.2	0.5
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	67.3	68.2	0.9
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	66.6	68.2	1.6
Shepherd Avenue	Sunnyside Avenue to Project Intersection (Fordham Avenue) 3	65.1	66.8	1.7
Shepherd Avenue	Project Intersection (Fordham Avenue) 3 to Fowler Avenue	65.1	65.8	0.7
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	69.4	69.6	0.2
Willow Avenue	Behymer Avenue to Shepherd Avenue	72.4	72.5	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	63.5	63.5	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	64.1	65.3	1.2
Clovis Avenue	Teague Avenue to Nees Avenue	66.3	66.9	0.6
Clovis Avenue	Nees Avenue to Alluvial Avenue	67.9	68.4	0.5
Clovis Avenue	Alluvial Avenue to Herndon Avenue	69.9	70.2	0.3
Sunnyside Avenue	Project Intersection 1 to Shepherd Avenue	54.4	60.5	6.1
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	60.3	61.6	1.3

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Sunnyside Avenue	Teague Avenue to Nees Avenue	60.6	61.8	1.2
Fowler Avenue	Behymer Avenue to Ticonderoga	63.4	63.5	0.1
Fowler Avenue	Ticonderoga to Shepherd Avenue	64.4	64.4	0.0
Fowler Avenue	Shepherd Avenue to Teague Avenue	65.1	65.7	0.6
Fowler Avenue	Teague Avenue to Nees Avenue	65.1	65.7	0.6
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	69.9	70.1	0.2

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM MD ACOUSTICS. 2023.

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB.

NOISE IMPACTS TO ON-SITE RECEPTORS DUE TO PROJECT GENERATED TRAFFIC

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards of 65 dBA CNEL, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls. The noise calculations show that along Shepherd Avenue a 6’ soundwall placed at 70 feet from the centerline would result in noise attenuation from 69.1 dBA CNEL down to a range of 62.7 to 63.1 dBA CNEL depending on the precise location along Shepherd Avenue. This range is below the 65 dBA CNEL noise standards with the 6’ soundwall.

The noise calculations also show that along Sunnyside Avenue a 6’ soundwall placed at 47 feet from the centerline would result in noise attenuation from 69.9 dBA CNEL down to a range of 63.7 dBA CNEL. This is below the 65 dBA CNEL noise standards with the 6’ soundwall.

OPERATIONAL NOISE INCREASES

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

EXTERIOR TRAFFIC NOISE AT PROPOSED USES

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan. Thus, this is considered a potentially significant impact.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls as required by Mitigation Measure 3.11-1. As previously discussed, the noise calculations show that along Shepherd Avenue a 6' soundwall placed at 70 feet from the centerline would result in noise attenuation from 69.1 dBA CNEL down to a range of 62.7 to 63.1 dBA CNEL depending on the precise location along Shepherd Avenue. This range is below the 65 dBA CNEL noise standards with the 6' soundwall.

The noise calculations also show that along Sunnyside Avenue a 6' soundwall placed at 47 feet from the centerline would result in noise attenuation from 69.9 dBA CNEL down to a range of 63.7 dBA CNEL. This is below the 65 dBA CNEL noise standards with the 6' soundwall.

Furthermore, as required by Mitigation Measure 3.11-2, any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6-foot sound walls. Implementation of the following mitigation measures will ensure that these potential impacts are reduced to a **less than significant** level.

INTERIOR NOISE IMPACTS AT PROPOSED RESIDENTIAL USES

Modern construction typically provides a 25-dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB L_{dn}, or less, will typically comply with the City of Clovis 45 dB L_{dn} interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows, are generally required for exterior noise levels exceeding 70 dB L_{dn}.

As mentioned before, the Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along

Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a **less than significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *A 6-foot-tall barrier shall be constructed along the south boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue, in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.*

Mitigation Measure 3.11-2: *The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.*

Impact 3.11-2: Construction Noise - The Proposed Project has the potential to generate 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. (Less than Significant with Mitigation)

CONSTRUCTION NOISE

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise. Mitigation Measure 3.11-3 embodies a preexisting legal requirement from City of Clovis Municipal Code Section 5.27.604 that ensures that construction activities are performed within specific hours. Mitigation Measure 3.11-4 provides specific requirements for attenuating noise during construction. With implementation of the Mitigation Measure 3.11-3 and 3.11-4, the potential impacts are reduced to a **less than significant** level.

Mitigation Measure 3.11-3: *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.*

Mitigation Measure 3.11-4: *The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:*

- *During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.*
- *Idling equipment shall be turned off when not in use.*
- *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*

Impact 3.11-3: Cumulative Noise - The Proposed Project has the potential to generate 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. (Less than Significant)

To predict existing and cumulative noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference between with and without project conditions. In addition, the noise contours for 55, 60, 65, and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed Project on the nearby roadways were calculated for existing, existing plus Project, cumulative 2046, and cumulative 2046 plus project scenarios.

Table 3.11-9 and 3.11-10 compare the without and with project scenario and shows the change in traffic noise levels as a result of the proposed Project. It takes a change of 3 dB or more to hear a perceptible difference

TABLE 3.11-10: 2046 SCENARIO - NOISE LEVELS ALONG ROADWAYS (DBA CNEL)

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Behymer Avenue	Willow Avenue to Minnewawa Avenue	66.4	66.4	0.0
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	67.0	67.0	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	63.3	63.4	0.1
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	71.9	72.1	0.2
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	71.2	71.6	0.4
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	70.8	71.5	0.7
Shepherd Avenue	Sunnyside Avenue to Project Intersection (Fordham Avenue) 3	69.0	69.8	0.8
Shepherd Avenue	Project Intersection (Fordham Avenue) 3 to Fowler Avenue	69.0	69.3	0.3
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	70.5	70.6	0.1
Willow Avenue	Behymer Avenue to Shepherd Avenue	76.3	76.3	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	68.6	68.6	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	69.9	70.2	0.3
Clovis Avenue	Teague Avenue to Nees Avenue	69.9	70.2	0.3
Clovis Avenue	Nees Avenue to Alluvial Avenue	70.9	71.1	0.3
Clovis Avenue	Alluvial Avenue to Herndon Avenue	71.8	72.1	0.2
Sunnyside Avenue	Project Intersection 1 to Shepherd Avenue	68.7	69.2	0.5
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	64.1	64.7	0.6
Sunnyside Avenue	Teague Avenue to Nees Avenue	63.9	64.5	0.6
Fowler Avenue	Behymer Avenue to Ticonderoga	64.3	64.3	0.0
Fowler Avenue	Ticonderoga to Shepherd Avenue	67.9	67.9	0.0

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Fowler Avenue	Shepherd Avenue to Teague Avenue	68.4	68.7	0.3
Fowler Avenue	Teague Avenue to Nees Avenue	67.9	68.2	0.3
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	71.4	71.6	0.1

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM MD ACOUSTICS. 2023.

As shown in Table 3.11-10, the Cumulative 2046 scenario has a maximum change in noise level of 0.7 dBA CNEL. Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has a 0.5 dBA CNEL change. Future residential uses will be in the normally compatible level along that segment. Therefore, a **less than significant** impact would occur with regard to this impact.

Impact 3.11-4: The proposed Project has the potential to generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment. According to table 3.11-3, a large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible when close to the adjacent residential properties, but is below any threshold of risk to architectural damage when compared to table 3.11-4. Therefore, a **less than significant** impact would occur within regard to this impact.

Impact 3.11-5: 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. (No Impact)

The Project site is outside the Fresno Yosemite International Airport Contours. There are no private airstrips, public airports, or public use airports within two miles of the Project site. Therefore, this impact is not applicable to the proposed Project.

This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, parks and recreation, schools, and other public facilities for the proposed Project. The information in this section is primarily derived from the:

- *City of Clovis General Plan*; and
- *Clovis Master Service Plan Update* (City of Clovis, 2014).

There were no comments received during the NOP scoping process related to this environmental topic.

3.12.1 ENVIRONMENTAL SETTING

CITY OF CLOVIS SERVICES

The City of Clovis receives funds for the provision of public services through development impact fees, property taxes, and general funds and grants. As land is developed within the City and annexed into the City of Clovis, these fees apply. The City of Clovis periodically reviews these fee structures to ensure that they provide adequate financing to cover the ongoing provision of City services, determine the correct level of adjustment required, and assure funding for needed infrastructure going forward. The City's General Services Department is responsible for continual oversight to ensure that the fee structures are adequate.[1]

Police protection to the unincorporated areas is provided by the Fresno County Sheriff and California Highway Patrol. The City has a mutual aid assistance agreement with both agencies. Continued development and annexation will affect services, but the City has proposed future facilities to accommodate growth. The operations of the Police Department, now and as the City grows, will be funded through the General Fund, Community Facilities District (CFD) fund, and grants (2014 Update).

City of Clovis Police Department

Police protection services in the City of Clovis are provided by the Clovis Police Department (CPD). The CPD operates out of its headquarters located at the Clovis Civic Center. As of 2021, the CPD has 102 sworn officers (CPD, 2021B). The department serves a community of 122,000 (CPD, 2021A). Based on this data, the service ratio is approximately 0.82 police officers per 1,000 residents.

The department classifies calls for service as Priority 1, Priority 2 or Priority 3. Priority 1 calls are calls where a threat is posed to life or a crime of violence. Priority 2 calls are calls for service where there is an urgency or suspicious behavior. Priority 3 calls are calls for service where no emergency or serious problem is involved. As of 2021, the Department reached their service rating goal of over 90 percent, with an overall approval rating of 94.7 percent (CPD, 2021A). There was an increase in all Priority level calls from 2020 to 2021, due to the COVID-19 Pandemic. The top six incident types

[1] It should be noted that fee laws do not allow any deficits in fees to be made up retroactively.

increased in 2021 from 2020: Assist, Check on Welfare, Alarm, Animal Complaint, Follow up, and Unwanted (CPD, 2021B).

ORGANIZATION

The Department is organized into four major divisions, which are composed of eight budgetary sections as shown below (City of Clovis, 2014).

Patrol Division

The Patrol Division is the most highly visible section of the Police Department and is overseen by a Police Captain. Uniformed Patrol, which includes traffic enforcement, a Gang Response Team, the Reserve Unit, and Community Service Officers respond to calls for service and represent the Police Department in their daily contact with the citizens of Clovis. The Patrol Division is also working with all City departments to enforce Muni-Code issues and resolve on-going issues with specific code enforcement. They also deal effectively and appropriately with the criminals they apprehend. The Police Chaplain Program assists the Department and victims of crime during traumatic events or at times of grief. The Patrol Division's aggressive and pro-active approach toward eliminating criminal activity and protecting its citizens has helped create a safe community for the citizens of Clovis (City of Clovis, 2014).

Planning and Neighborhood Services

Two Police Corporals are assigned to this division and are actively involved in reviewing new construction within the City, oversee alcohol licensing and permits, oversee massage parlors, and practitioners and run the police response to special events in the City (City of Clovis, 2014).

Communications

The Communications section provides dispatch services for the Police Department and serves as the primary answering point for 9-1-1 calls made from within the City limits. They serve as a resource to police officers, providing automated information as necessary to officers in the field (City of Clovis, 2014).

Investigations

The Investigations section is responsible for follow-up on all felony cases and preparing the cases for submittal to the District Attorney's Office. The section is divided into two main areas of responsibility: General Investigations and Narcotics. Computer Crime and Identity Theft cases are up significantly (200%) and are beginning to take a toll on other general investigators' responsibilities. Narcotics Investigators continue to work with Patrol as a team targeting street level dealers and their suppliers. Narcotics Detectives also assist in vice cases and the Gang Response Unit (City of Clovis, 2014).

Youth Services

The Youth Services unit is charged with providing services to prevent youth from drugs and alcohol abuse and prevent repeat juvenile offenders. Youth Services supports parents to manage their children and to utilize other youth services providers. The Youth Services Division is also responsible for graffiti removal throughout the City (City of Clovis, 2014).

Support Services

The Support Services unit encompasses diverse duties that focus on providing outstanding service to its customers and the citizens of Clovis. Division sections and functions include Communications/Dispatch, citizen and business services, fleet management, technology, department personnel training, department equipment and supplies management, and Records and Property (City of Clovis, 2014).

Administrative Services

The Administrative Services Division is the office of Chief of Police, which provides leadership and general direction and oversight for the entire department. The Administrative Services Division is responsible for several functions including administrative support to the Chief, special projects, research, internal audits and compliance, Homeland Security, grant administration, public information officer duties, employee injury, and oversight of workers' compensation issues. The office support staff also performs a variety of personnel functions regarding recruitment and hiring and also provides support for other division commanders (City of Clovis, 2014).

Animal Shelter

The Animal Services Division is responsible for responding to calls for service in the community, investigating cruelty to animal cases, operating the Adoption Center and stray animal facility. The Animal Services Division works closely with Clovis veterinarians to achieve the primary goal of increasing the pet adoption rate, and educating the public on the importance of reducing the pet population through spaying and neutering (City of Clovis, 2014).

TABLE 3.12-1: CLOVIS CRIME STATISTICS (2017-2019)

CATEGORY/CRIME	*2017*	*2018*	*2019*
Population	**108,419**	**111,759**	**114,170**
Total Violent Crimes	**243**	**221**	**243**
Homicide	0	1	0
Rape	44	46	54
Robbery	61	36	32
Assault	138	138	157
Total Property Crimes	**2,895**	**2,438**	**2,276**
Burglary	453	358	307
Larceny Theft	2,234	1,932	1,810
Motor Vehicle Theft	208	148	159
Arson	8	6	6

SOURCE: FBI CRIME STATISTICS; TABLE 8, YEARS 2017, 2018, 2019, ACCESSED HTTPS://UCR.FBI.GOV/ .

As shown in the table, the majority of crimes committed in Clovis consist of property crimes, primarily larceny.

City of Clovis Fire Department

The Clovis Fire Department (CFD) is responsible for providing Fire Suppression, Technical Rescue, Hazardous Materials Spill/Release Mitigation, Emergency Medical Services (EMS), Life Safety and Enforcement Services and Emergency Preparedness for the citizens of Clovis. This responsibility includes the following functions: fire protection; emergency medical services; urban search and rescue; high angle, trench, water and confined space rescue; hazardous condition mitigation;

strategic planning; administration; fire cause and origin investigations; code enforcement; public education; emergency preparedness; disaster response and coordination. These responsibilities are distributed through two bureaus and eight divisions (City of Clovis, 2022A).

As of 2022, there are 67 well-trained and highly skilled professional firefighters, fire engineers, fire officers, chief officers, fire inspectors, and administrative staff. Together, emergency services are provided to approximately 120,124 residents with 26 square miles in the City's first due response area. In September of 2021, the CFD placed two new fire engines in-service to replace fire engines which were over 15 years old and in October, an additional three personnel were hired to fill vacancies. The CFD added a second Training Captain to the Training Division to provide support to the 13 newly hired firefighters. (CFD, 2021).

The CFD maintains response time goals for various types of calls. The CFD received a total of 12,244 calls in 2022 (CFD, 2022). Table 3.12-2 presents CFD response time goals, and actual response times from 2021. As shown in Table 3.12-2, the Department did not meet its goal times for any type of call.

TABLE 3.12-2: 90TH PERCENTILE RESPONSE GOALS AND RESPONSE TIME PERFORMANCE

RESPONSE GOAL	*GOAL RESPONSE TIME*	*ACTUAL RESPONSE TIME*
FIRST UNIT ARRIVAL, TOTAL RESPONSE TIME:		
EMS	6 Minutes, 30 seconds	7 Minutes, 35 seconds
MVA/Rescue	7 Minutes	7 Minutes, 31 seconds
Fire	7 Minutes	7 Minutes, 43 seconds
EFFECTIVE RESPONSE FORCE (DAILY STAFFING OF 19):		
Fire	10 Minutes, 30 seconds	11 Minutes, 54 seconds
TURNOUT TIME FOR ALL PRIORITY RESPONSES:	1 Minute, 30 seconds	1 Minute, 36 seconds

SOURCE: CFD 2022 ANNUAL REPORT

ISO RATING

The Insurance Services Office (ISO) Public Protection Classification Program currently rates the CFD as a 2 on a scale of 1 to 10, with 1 being the highest possible protection rating and 10 being the lowest. The ISO rating measures individual fire protection agencies against a Fire Suppression Rating Schedule, which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm response and initial attack, and adequacy of local water supply for fire-suppression purposes. The ISO ratings are used to establish fire insurance premiums (City of Clovis, 2022A).

FIRE STATIONS

There are currently six stations in operational use: Stations 1 through 6. In July 2021, hiring took place which made it possible to add the sixth fire company in service. Station 6 serves nearly 25,000 residents in the neighborhoods east of Temperance Avenue and south of Bullard Avenue; the new

station opened in September 2022.[2] The new station is strategically located to meet the needs of the growing Loma Vista Community. The CFD fire stations and locations are each listed below.

- Station 1 – 633 Pollasky Avenue (operational)
- Station 2 – 2300 Minnewawa Avenue (operational)
- Station 3 – 555 North Villa Avenue (operational)
- Station 4 – 2427 Armstrong Avenue (operational)
- Station 5 – 790 North Temperance Avenue (operational)
- Station 6 – 2388 Encino Avenue (operational) In addition, the CFD operates out of the Training Center, located at 3455 Lind Avenue, as well. (City of Clovis, 2022B).

City of Clovis Parks and Recreation Division

The General Services Department provides a range of services for residents and visitors, such as, Senior Services, Transit, and Clovis Recreation programs (City of Clovis, 2022C). The Parks Division falls under the direction of the Public Utilities Department and is overseen by a full time Parks Manager with a staff of approximately 20 employees. The goal of the Division is to maintain recreational facilities, streetscape, parks, trails, and other landscaped open space areas, City trees, and building grounds. (City of Clovis, 2018). The City of Clovis Recreation Section is responsible for operating the City of Clovis Batting Cages, Clovis Rotary Skatepark, Adult slow-pitch softball at Clovis Rotary Park, and the youth and adult programs at the Clovis Recreation Center (City of Clovis, 2022D).

The City of Clovis currently owns and maintains 81 parks, two of which are jointly maintained by a homeowners association (HOA) (i.e. Harlan Ranch,TR6200)). These parks range from passive (Dry Creek Trailhead and Cottonwood) to active (Rotary and Sierra Bicentennial), and are a mix of smaller pocket parks to larger basin parks. All parks are classified as either Pocket Park, Neighborhood Park, Area Park, Community Park, Regional Park, School Park, or Basin Park based on the parks standards outlined by the City. In addition to these facilities, Clovis maintains over 28.1 miles of trails. These trails are comprised of four primary trails (Clovis Old Town Trail, Dry Creek Trail, Enterprise Trail, and PG&E Trail) as well as a series of greenbelt paths in the northeast corner of the City and Paseos in the southeast (City of Clovis, 2018).

The Parks Division maintains approximately 452 total acres of City parks and landscaping; 81 parks totaling 173 acres; 263 acres of green belts, street gardens, trails, paseos, and landscaped median islands; 6 acres of building grounds; 12 acres of undeveloped park land and miscellaneous public right-of-way property; approximately 40,000 City street trees; and 28.1 existing miles of trails with 36 miles planned for the future (City of Clovis, 2018).

The Clovis General Plan establishes a goal of four acres of parkland per 1,000 residents, which exceeds the requirement set forth by the Quimby Act. Based on the 2017 population of 110,762

[2] See: https://www.clovisroundup.com/clovis-fire-station-6-opens-for-added-public-safety/

residents and the park goals laid out by the General Plan, the City is working successfully toward meeting the park area goals. Currently, the City has 81 designated City parks that total approximately 173 acres. The goal for future planning increases the park area to approximately 380 acres and also substantially increases the number of trails (City of Clovis, 2018).

Types of Parks

POCKET PARKS

Pocket Parks are the smallest park classification at up to one acre in size. These parks are centrally located in residential neighborhoods and planned for families and children. Intended to offer a small open space/recreational venue of a more passive or intimate nature internal to a specified residential development. Typically, these parks provide picnic and sitting areas and should be accessible by foot or bicycle. Currently, the City has 1.58 acres of Pocket Parks made up of eight locations (City of Clovis, 2018).

NEIGHBORHOOD PARKS

Typically, a neighborhood park ranges from one to two acres in size. These parks are uniquely tailored to the neighborhoods they serve and provide active recreation and a balance of amenities that appeal to a broad range of individuals. Currently, the City has 44.38 acres of Neighborhood Parks comprised of 50 parks. Three of these are HOA maintained (City of Clovis, 2018).

AREA PARKS

Area Parks function much like Neighborhood Parks, but are typically larger, ranging from 3 to 20 acres, and serve a larger population. These are intended to provide amenities for multiple age groups and connect to neighborhoods via trails or sidewalks. Currently, the City has 11 Neighborhood Parks totaling 41.99 acres (City of Clovis, 2018).

COMMUNITY PARKS

Community Parks are considerably larger in scale, ranging from 15 to 100 acres. The intent of these parks is to meet a wide range of community recreation and social needs focused on both passive and active recreation. The purpose of a community park is to bring people together to recreate, socialize, and find quiet space. Amenities may include those similar to a Neighborhood Park, as well as group picnic facilities, internal trails, and athletic facilities. Currently, the City has five Community Parks totaling 67.51 acres (City of Clovis, 2018).

REGIONAL PARKS

Regional Parks typically service multiple cities, cross political jurisdictions, and exceed 100 acres in size. The purpose of the parks is to preserve natural resources, remnant landscapes, and open space. These parks can include passive activities, such as hiking and nature viewing, as well as active recreation areas, gardens, picnic facilities, and other special uses. There are currently no existing Regional Parks in the City of Clovis (City of Clovis, 2018).

- **Woodward Park** is three miles west of the City's western limits. This regional park is approximately 300 acres and includes amenities such as a multi-use amphitheater, a

Japanese garden, **[3]fenced dog park, exercise par course, playgrounds, a lake, picnic areas, mountain bike courses, and miles of multipurpose trails that are part of the San Joaquin River Parkway's Lewis S. Eaton Trail. There are six shelters located throughout the park.

- **Millerton Lake State Recreation Area** is 6.6 miles north of the SOI beyond the non-SOI Plan Area boundary. It spans over 6,800 acres of land; Millerton Lake (Reservoir) spans an additional 4,900 acres when full. The land portion of the recreation area is operated by the California Department of Parks and Recreation. Millerton Lake is managed by the U.S. Bureau of Reclamation. Recreational facilities include boat launch ramps, picnic areas, hiking trails, mountain biking trails, campgrounds, and boating campsites.
- **Lost Lake Recreation Area** is a Fresno County facility on the San Joaquin River. It is 4.5 miles north of the SOI and includes a 38-acre lake, campground, picnic area, softball field, volleyball courts, hiking trail, nature study area, playgrounds, and restrooms.

BASIN PARK

This classification pertains to Fresno Metropolitan Flood Control basins used in concert with, or in lieu of, other classes of parks to meet open space needs. These sites typically range from five to 20 acres and their uses are generally limited to dry periods due to their main priority as flood control facilities. Basin Parks offer connections to the larger community via trails or sidewalks. There are currently three Basin Parks totaling 21.13 acres (City of Clovis, 2018).

SCHOOL PARK

The School Park classification pertains to school sites used in concert with, or in lieu-of, other classes of parks to meet open space needs. The City maintains an "open gate" policy for Clovis Unified School District (CUSD) land and facilities available for recreational use after normal school hours and during the summer. These sites are best suited for community-based recreational programs and youth athletic facilities. Currently there are approximately 271 acres of CUSD Sites available for shared use.

The inventory of parks for the City of Clovis lists existing facilities found in every park. The parks are organized according to their classification type. Typical facilities within the Clovis Parks include, but are not limited to, playgrounds, benches, grill stations/BBQs, open lawns, and generous tree canopies. The data for the asset inventory was collected by Land Design and Green play, and this information was supplemented with GIS data from the City and additional site inventory visits (City of Clovis, 2018).

City Parks

City contains approximately 81 parks totaling 173 acres; 263 acres of green belts, street gardens, trails, paseos, and landscaped median islands; 6 acres of building grounds; 12 acres of undeveloped park land and miscellaneous public right-of-way property; approximately 40,000 City-street trees;

[3] **Nearby Regional Recreation Areas. The following regional recreation areas are near the Clovis Plan Area and accessible to its residents and visitors. However, they are not part of the SOI Area or within the City limits.

and 28.1 existing miles of trails with 36 miles planned for the future. The Clovis General Plan establishes a goal of four acres of parkland per 1,000 residents. Table 3.12-3 summarizes the City's park facilities by category. Table 3.12-2 utilizes the 2022 population of the City, 123,665, to determine the current acreage ratio (DOF, 2022).

TABLE 3.12-3: SUMMARY OF PARKS AND RECREATION FACILITIES

PARK TYPE	*NUMBER*	*ACREAGE*	*CURRENT RATIO (ACRES PER 1,000 RESIDENTS)*
Pocket Parks	8 locations	1.58	0.013
Neighborhood Parks	50 parks	44.38	0.36
Area Parks	11 parks	41.99	0.34
Community Parks	5 parks	67.51	0.55
Regional Parks	3 sites*	~1,238	10.01
Basin Parks	3 parks	21.13	0.17
School Parks	--	271	2.19
TOTAL	**--**	**1,685.6**	**--**

SOURCE: CLOVIS PARKS MASTER PLAN, 2018

**SITES ARE NOT WITHIN CITY BORDER OR SOI BUT SERVICE CLOVIS POPULATIONS*

When the acreage is broken down into functional categories, it displays that the City currently does not meet park acreage standards for any category. While Regional Parks acreage surpasses the City's goal of four acres per 1,000 residents, no Regional Parks are within the City of Clovis; Regional Parks typically service multiple cities across political jurisdictions (City of Clovis, 2018). Further, the City has a long-standing joint use agreement with CUSD for use of school district recreational facilities by the public. Due to limited access, these facilities are calculated at half their acreage and facility quantities in the Level of Service (LOS) analysis.[4] Thus, of the 271 acres of CUSD school playfields, approximately 135 acres are credited toward meeting the City's parkland standard. (City of Clovis, 2018).

The City's Parks Master Plan identifies additional facility needs required over the next five to ten years. The goal for future planning increases the park area to approximately 380 acres and also substantially increases the number of trails. This amount is approximate and could be met by a combination of utilizing existing undeveloped parkland and acquiring new parkland to develop (City of Clovis, 2018).

Typical facilities within the Clovis Parks include, but are not limited to, playgrounds, benches, grill stations/BBQs, open lawns, and generous tree canopies (City of Clovis, 2018).

[4] Level of Service (LOS) standards and analysis is a commonly-used method to examine how well a community's park and recreation needs are being met through a comparison to standards of national, state, and comparable municipality; population size is an important factor for assessing park and recreational needs.

OTHER AGENCY SERVICES

Clovis Unified School District

The City of Clovis and its sphere of influence lies primarily within the CUSD. Only a small portion of the southwest area of the City lies in the Fresno Unified Scholl District (FUSD). A small portion of the southeast area of the proposed sphere of influence lies within the Sanger Unified School District (SUSD). These districts are affected by residential growth in the Clovis area. CUSD is managing the growth by financing new facilities through bonds, development fees, and state schools funding (City of Clovis, 2014).

The CUSD provides school services for grades TK through 12 throughout most of Clovis, 20 percent of Fresno and a small portion of unincorporated Fresno County. The CUSD is approximately 200 square miles and serves more than 42,000 students at 44 comprehensive schools. (CUSD, 2022A). Table 3.12-4 provides the CUSD school inventory for K-6 grade schools, 7-8 grade schools, and 9-12 grade schools. Table 3.12-4 does not include the CUSD's education service schools or programs.

TABLE 3.12-4: PUBLIC SCHOOLS SERVING CLOVIS

SCHOOL	*GRADES SERVED*	*ENROLLMENT 2021-2022 SCHOOL YEAR*	*ADDRESS*
K-6 SCHOOLS			
Virginia R. Boris Elementary	K-6	632	7071 E Clinton Ave, Fresno,
Bud Rank Elementary	K-6	677	3650 Powers Ave
Cedarwood Elementary	K-6	762	2851 Palo Alto Ave
Century Elementary	K-6	628	965 N Sunnyside Ave
Clovis Elementary	K-6	651	1100 Armstrong Ave
Cole Elementary	K-6	669	615 W Stuart Ave
Copper Hills Elementary	K-6	593	1881 E Plymouth Way, Fresno
Dry Creek Elementary	K-6	921	1273 N Armstrong Ave
Fancher Creek Elementary	K-6	680	5948 E Tulare Ave, Fresno
Fort Washington Elementary	K-6	575	960 E Teague Ave, Fresno
Freedom Elementary	K-6	712	2955 Gettysburg Ave
James S Fugman Elementary	K-6	794	10825 N Cedar Ave, Fresno
Garfield Elementary	K-6	595	1315 N Peach Ave
Gettysburg Elementary	K-6	663	2100 Gettysburg Ave
Jefferson Elementary	K-6	610	1880 Fowler Ave
Liberty Elementary	K-6	611	1250 E Liberty Hill Rd, Fresno
Lincoln Elementary	K-6	679	774 E Alluvial Ave, Fresno

SCHOOL	*GRADES SERVED*	*ENROLLMENT 2021-2022 SCHOOL YEAR*	*ADDRESS*
Maple Creek Elementary	K-6	521	2025 E Teague Ave, Fresno
Mickey Cox Elementary	K-6	623	2191 Sierra Ave
Miramonte Elementary	K-6	558	1590 Bellaire Ave
Mountain View Elementary	K-6	567	2002 E Alluvial Ave
Nelson Elementary	K-6	475	1336 W Spruce Ave, Fresno
Roger S. Oraze Elementary	K-6	820	3468 N Armstrong Ave, Fresno
Pinedale Elementary	K-6	490	7171 North Sugarpine, Fresno
Reagan Elementary	K-6	682	3701 Ashlan Ave
Red Bank Elementary	K-6	768	1454 N Locan Ave
Riverview Elementary	K-6	655	2491 E Behymer Ave, Fresno
Sierra Vista Elementary	K-6	484	510 Barstow Ave
Tarpey Elementary	K-6	658	2700 Minnewawa Ave
Temperance Kutner Elementary	K-6	591	1448 N Armstrong Ave, Fresno
Valley Oak Elementary	K-6	469	465 E Champlain Dr, Fresno
Weldon Elementary	K-6	575	150 Dewitt Ave
Woods Elementary	K-6	688	700 Teague Ave
Janet L. Young Elementary	K-6	639	3140 N Locan Ave, Fresno
INTERMEDIATE SCHOOLS			
Alta Sierra Intermediate	7-8	1304	380 W Teague Ave
Clark Intermediate	7-8	1495	902 5th St
Granite Ridge Intermediate	7-8	1122	2770 E International Ave, Fresno
Kastner Intermediate	7-8	1141	7676 N First St, Fresno
Reyburn Intermediate	7-8	1516	2901 N De Wolf Ave
HIGH SCHOOLS			
Buchanan High	9-12	2685	1560 N Minnewawa Ave
Clovis High	9-12	2928	1055 Fowler Ave
Clovis East High	9-12	2733	2940 Leonard Ave
Clovis North High	9-12	2442	2770 E International Ave, Fresno
Clovis West High	9-12	2096	1070 E Teague Ave, Fresno

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION 2021-22ENROLLMENT BY GRADE

As shown in Table 3.12-4, the schools serving the City had a total enrollment of approximately 41,177 students, of which 21,715 were enrolled in elementary (K-6), 6,578 were enrolled in intermediate school (grades 7-8) and 12,884 were enrolled in high school (grades 9 – 12).

District-wide CUSD Schools have a total enrollment of 42,699 students for the 2021-2022 school year. Table 3.12-5 provides a summary of the enrollment by grade within CUSD.

TABLE 3.12-5: ENROLLMENT BY GRADE CUSD (2021-2022)

CLOVIS UNIFIED	*GRADE LEVEL*													
	K	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*TOTAL 2021-2022*
Total	3,287	2,946	3,074	3,074	3,159	3,245	3,287	3,287	3,415	3,501	3,458	3,287	3,586	**42,699**
% Total	7.7	6.9	7.2	7.3	7.4	7.6	7.7	7.7	8.0	8.2	8.1	7.7	8.4	**100%**

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION 2021-22 ENROLLMENT BY GRADE.

The CUSD's school building capacity was determined to be 21,916 for grades TK-6, 6,561 for grades 7-8, and 12,135 for grades 9-12. The CUSD does not have existing capacity to accommodate projected students from new development. Therefore, the CUSD will need additional school facilities during the next five years for approximately 2,339 students in grades TK-6, 496 students in grades 7-8, and 1,034 students in grades 9-12 (Odell Planning, 2022).

The CUSD adopted Level I and II School Facilities (Developer) Fees in June 2022. Developer Fees are utilized to enhance and maintain existing facilities; they are also put towards construction and expansion of new facilities (CUSD, 2022B).

The City of Clovis has a unique partnership with the school districts, in which the schools provide and operate most recreation programs for the youth and teens of the community. While the schools do provide programming, the City of Clovis also operates youth and adult programs through the Clovis Recreation Center and additional programing and events for the community (City of Clovis, 2018).

Library Services

Library services are provided by Fresno County and funded by the County General Fund and countywide sales tax override. A branch library is located in the Clovis Civic Center (1155 Fifth Street). New library facilities are proposed for inclusion in each of the Urban Villages outlined in the 1993 General Plan Update (City of Clovis, 2014).

The Fresno County Public Library provides collections and services through its Central Resource Library and 34 branches. It is part of the San Joaquin Valley Library System (SJVLS), a cooperative network of 10 public library jurisdictions in the counties of Fresno, Kern, Kings, Madera, Mariposa, Merced and Tulare (FCPL, 2022A).

The Clovis branch is 8,627 square feet and is open to the public seven days a week; from 9:00 AM to 9:00 PM Mondays through Thursdays, 9:00 AM to 5:00 PM Fridays and Saturdays, and 12:00 PM to 5 PM on Sundays. The Clovis branch has ten laptops available for checkout and other technologic tools available to the public. The library offers black & white and color printing, as well as a photocopier and a recycling drop-off bin (FCPL, 2022B).

Clovis Senior Center

The Community Services Division administers various senior citizen programs at the Clovis Senior Center. The Clovis Senior Center is open to anyone age 50 or older and is located at 850 Fourth Street between the Clovis Veterans Memorial District Building and the San Joaquin Valley College of Law. Clovis Senior Services sponsors a wide range of classes, programs, and activities to promote healthy and independent living for individuals 50 years and older. No membership fee is required, although some classes and sessions have a small activity fee and/or registration fee (City of Clovis, 2022E).

Clovis Health Care Facilities.

Health care facilities within Clovis encompass Community Health Systems, Kaiser Permanente Clovis Medical Offices, residential care facilities, as well as private physicians and other medical practitioners.

Community Health System is a locally owned, not-for-profit, public-benefit organization based in Fresno, California. Four acute-care hospitals– Community Regional Medical Center, Clovis Community Medical Center, Fresno Heart & Surgical Hospital and Community Behavioral Health Center-, a cancer institute along with several long-term care, outpatient and other healthcare facilities are in operation. The Clovis Community Center is located on the northeast corner of Herndon and Temperance Avenues. The Clovis Community Medical Center houses 208 licensed beds, and has plans to add 144 more in 2022, bringing the total number of private rooms from 208 to 352 (Community Health System, 2022).

3.12.2 REGULATORY SETTING

STATE

Police Protection

There are no federal or state regulations related to police protection services applicable to the proposed Project.

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical

services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

CALIFORNIA FIRE CODE

The 2019 California Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NFPA 1710

The National Fire Protection Association (NFPA) 1710 Standards are applicable to urban areas and where staffing is comprised of career firefighters. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one minute or less for at least 90 percent of the alarms;
- Turnout time of one minute or less for EMS calls (80 seconds for fire and special operations response);
- Fire response travel time of four minutes or less for the arrival of the first arriving engine company at a fire incident and eight minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident;
- Eight minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department.

Parks/Recreation

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City collects impact fees at the time of building permits and final maps that include both capital impacts and land acquisition.

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Chapter 4.9, Payment of Fees, Charges, Dedications, or Other Requirements Against a Development Project. *Section 65995-65998 (h)* The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;

- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

THE KINDERGARTEN-COMMUNITY COLLEGE PUBLIC EDUCATION FACILITIES BOND ACT OF 2016 (PROP 51)

The Kindergarten-Community College Public Education Facilities Bond Act of 2016 was the first education-related bond measure to appear on the ballot since 2006. This act was approved by California voters in November 2016 and provided for a bond issued of $9 billion with $7.0 billion earmarked for K-12 school facilities and $2 billion earmarked for community college facilities. The $7.0 billion for K-12 school facilities was allocated as follows: $3 billion for the construction of new school facilities, $500 million for providing school facilities for charter schools, $3 billion for the modernization of school facilities, and $500 million for providing facilities for career technical education programs. The $2 billion allocated to community college facilities was for acquiring, constructing, renovating, and equipping community college facilities.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as "Proposition 1A," reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.

- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the

votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

Level III fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

LOCAL

City of Clovis Municipal Code

Municipal Code Chapter 3.4, Park Acquisition and Development, establishes a method for coordinated acquisition and development of City park facilities. This Chapter states that any residential projects shall pay parks acquisition and development fees per dwelling unit.

Title 4 of the City Municipal Code is dedicated to Public Safety. The purposes of Chapter 4.2, Emergency Services, are to provide for the preparation and carrying out of plans for the protection of persons and property within the City in the event of an emergency; the direction of the Emergency Organization; and the coordination of the emergency functions of the City with all other public agencies, corporations, organizations, and affected private persons. Chapters 4.3 and 4.4 pertain to Fire Department and Fire Prevention; Chapter 4.4 codifies the adoption of the California Fire Code. Chapter 4.10, Fire Facility Development Impact Fee, claims that any owner/developer who constructs or causes a dwelling unit or a "dwelling unit equivalent" to be constructed in the City shall pay a fire department fee in addition to any other fees required to be paid by the City. Chapter 4.11, Police Department Fee, mirrors Chapter 4.10 in that this Chapter requires the payment of a fee for a specific public service, in the case of Chapter 4.11, the fee goes towards police facilities.

The purpose of Chapter 7.8, Library Facilities Development Impact Fees, is to create and establish a library facilities development impact fee ("library fee") for the City, which shall be used to mitigate adverse impacts to public library facilities and equipment attributed to new development. The library fee shall be used by the City to pay a portion of the costs of designated library facilities and equipment impacted by new development. The library fee shall be based on a method designed to ensure that developers pay their fair share of the cost of such library facilities and equipment required to serve the City's growing population.

Section 9.22.060, Fire protection, is under Chapter 9.22, Performance Standards. Section 9.22.060 explains that all new or modified development shall be built per the currently adopted California Fire Code, related Municipal Code provisions, and current Clovis Fire Code standards and policies.

Title 10 is dedicated to Parks and Recreation. This title regulates street trees and plants (Chapter 10.1); use of City parks and other City public facilities (Chapter 10.2); prohibited acts (Chapter 10.3); violations (Chapter 10.4); and skate park facilities (Chapter10.5).

Clovis Parks Master Plan (2018)

The City of Clovis Parks Master Plan provides strategic guidance in the provision of parks services to best develop, promote, utilize, manage, and maintain a functional park system for the City of Clovis. The master plan will guide policy development, prioritize demands and opportunities, and generate a strategic action plan for the next 5 to 10 years. The Plan addresses current and aging areas of the City park system, as well as future growth of the City and identifies opportunities that will expand and complement the City Parks Division and address the needs of the community.

City of Clovis General Plan

The General Plan includes several policies relevant to public services. It is noted that the currently adopted General Plan is the City of Clovis General Plan, adopted in August 2014; policies applicable to the Project are identified below:

Land Use Element

- Policy 6.1 Amendment criteria. The City Council may approve amendments to the General Plan when the City Council is satisfied that the following conditions are met:

  A. The proposed change is and will be fiscally neutral or positive.

  B. The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development.

  C. The proposed change is consistent with the Urban Village Neighborhood Concept when within an Urban Center.

  D. General Plan amendments proposing a change from industrial, mixed-use business campus, or office (employment generating) land use designations to non-employment-generating land use designation shall be accompanied by an analysis of the potential impacts on the City's current and long-term jobs-housing ratio, as well as an evaluation on the change or loss in the types of jobs.

  E. This policy does not apply to:

  i. County designations within the Clovis Planning Area or changes made by the City Council outside of the sphere boundary to reflect changes made by the County of Fresno.

  ii. Changes initiated by public agencies (such as school districts, flood control) for use by public agencies.

  iii. Changes initiated by the city within a specific plan.

Circulation Element

- Policy 1.3 Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
- Policy 1.5 Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).

Public Facilities and Services Element

- Policy 1.1 New development. New development shall pay its fair share of public facility and infrastructure improvements.
- Policy 1.4 Development-funded facilities. The City may require developments to install onsite or offsite facilities that are in excess of a development's fair share. However, the City shall establish a funding mechanism for future development to reimburse the original development for the amount in excess of the fair share costs.
- Policy 3.4 Joint use of facilities. Partner with public and private educational institutions to jointly use facilities for both civic and educational purposes.
- Policy 4.3 Lifelong learning. Enhance and expand Clovis' library facilities to meet the evolving educational and lifelong learning needs of the community. Coordinate with local educational institutions to offer courses and learning opportunities outside the classroom.
- Policy 4.4 Recreation programs. Provide and/or sponsor recreational programs and services that are accessible and affordable to residents of all ages and abilities and encourage active and healthy living.
- Policy 4.5 Youth programs. Coordinate with public and private schools, local nonprofits, service clubs, and other agencies to provide opportunities for youth to explore and enjoy sports, creative and performing arts, future career paths, civic activities, and volunteer opportunities.
- Policy 4.6 Senior programs. Collaborate with service providers to provide a wide variety of senior services and programs, including daily opportunities for seniors to have physical activity, social interaction, and mental stimulation.
- Policy 4.7 Childcare and childhood development. Encourage efforts to expand the overall capacity of and access to local childcare and early childhood development centers.
- Policy 4.8 Access to community facilities. Improve transit connections to community facilities for people who are transit-dependent.
- Policy 5.9 Proximity to emergency medical services. Require senior care facilities and other services providers that may need frequent emergency medical services to locate in proximity to fire stations and medical service providers.
- Policy 6.1 Fire and police service. Maintain staffing, facilities, and training activities to effectively respond to emergency and general public service calls.
- Policy 6.2 Resource allocation. Periodically conduct service level studies to analyze crime and emergency service performance data, to evaluate the effectiveness of prevention and reduction strategies, and to allocate resources accordingly.
- Policy 6.3 Emergency medical calls. Explore options to lessen the demand on fire and police services or expand reimbursement programs to ensure the service pays for measured impacts.
- Policy 6.4 Skilled medical facilities. Consider options to offset or apportion the higher cost of providing emergency medical service to facilities with existing skilled medical personnel on staff.

- Policy 6.5 Public safety hot spots. Prioritize improvement and enforcement activities to minimize existing and prevent future public safety hot spots. Reevaluate siting and development standards for facilities that generate high demands for service calls.
- Policy 6.6 Interagency support. Participate in mutual aid system and automatic aid agreements to back up and supplement capabilities to respond to emergencies.
- Policy 6.7 Interagency communications. Maintain an effective communication system between emergency service providers within Clovis and neighboring jurisdictions.
- Policy 6.8 Emergency preparedness planning. Maintain an emergency operations plan, an emergency operations center, and a hazard mitigation plan to prepare for actual or threatened conditions of disaster or extreme peril.
- Policy 6.9 Community outreach. Conduct outreach in the community to promote personal and public safety in daily life and in cases of emergency. Regularly update and inform the public on the real levels of crime and safety to strengthen their perceived sense of personal security.

Environmental Safety Element

- Policy 1.5 Critical and public facilities. Locate and design critical and public facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions. Ensure critical use facilities (e.g., hospital, police, and fire facilities) can remain operational during an emergency.
- Policy 1.6 Public information and emergency preparedness. Provide the public with accurate and reliable information regarding natural hazards to prevent and mitigate potential risks and exposure for life and property. Continue to maintain a local hazard mitigation plan and conduct programs to inform the general public of the City's emergency preparedness and disaster response procedures.

Open Space and Conservation Element

- Policy 1.1 Parkland standard. Provide a minimum of 4 acres of public parkland for every 1,000 residents.
- Policy 1.2 Existing parks. Upgrade and rehabilitate existing parks as necessary to meet the needs of the community and as the financial resources of the city allow.
- Policy 1.3 New parks and recreation facilities. Provide a variety of parks and recreation facilities in underserved and growing areas of the community.
- Policy 1.4 Joint use of education facilities. Provide a balanced system of parks and recreation facilities through joint use of facilities owned by school districts.
- Policy 1.5 Multipurpose open space. Design public facilities as multipurpose open space and recreation to serve the community's infrastructure needs while preserving and enhancing open space and water features. Prioritize the use of existing basins for existing areas, and for future areas prioritize the development of separate park facilities available year-round.
- Policy 1.7 Sustainability. Develop new and maintain existing parks and recreation facilities to achieve fiscal and environmental sustainability.
- Policy 1.8 Funding. Require new development to provide pocket and neighborhood parks, dedicate land for area parks, and pay impact fees for community and regional parks. Require

new development to establish lighting and landscape maintenance districts to fund operations and maintenance.

- Policy 1.9 Master plan. Periodically update the Parks Master Plan to direct the implementation of the city's open space facilities.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on public services if it would 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:
    - Fire Protection;
    - Police Protection;
    - Schools;
    - Parks; and
    - Other public facilities.
- An increase in 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; or
- If it includes recreational facilities or requires the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project would introduce new residential uses and residents to the City. The Project proposes 605 single-family units be developed. This will create an increased demand for police protection services compared to existing conditions. The City's Existing General Plan designates the Development Area as Rural Residential (RR) and therefore, anticipated potential development in and around the area. To the extent that the Project would have an incremental increase in demand on police protection services provided by the CPD, the Project would be required to pay the police facility fee in accordance with Clovis Municipal Code Chapter 4.11, Police Department Fees. The fee is imposed on residential development within the City for the purposes of assuring that the current

level of service goals of the City are met with respect to additional demands placed on police facilities from such development.

According to the most recent Department of Finance (2022) estimates, the Clovis population is 123,665 and the average number of persons residing in a dwelling unit is 2.81; therefore, the Project is estimated to increase the population by 1,700 residents (based on 2.81 persons per household). As of 2021, the CPD has 102 sworn officers (CPD, 2021B). With the addition of 1,700 residents, that equates to a staffing level of approximately 0.81 officers per 1,000 residents. This is not a significant change from the current service ratio of 0.82 officers per 1,000 residents. The City has anticipated additional officers would be hired as the City population grows. The City and CPD periodically monitor response times and reports annually on the results to ensure adequate police protection service levels are provided.

Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered police protection facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities. The Project would be required to pay the City's development fee specific to police, which in accordance with the Clovis Municipal Code, shall be used solely and exclusively for the purpose of funding police station improvements. Payment of the fee would offset the incremental increase in demand for police protection services associated with the Project. In addition, the Development Area would be required to annex into the City of Clovis Public Safety Community Facilities District.

Based on the ability of the CPD to serve the City, it is anticipated that the existing police department facilities are sufficient to serve the proposed Project and the construction of new or expanded police department facilities would not be required. Consequently, any impacts would be **less than significant**.

Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The CFD will be the responding agency to fires and emergencies at the Project site. For low-risk fires, three CFD personnel will respond; moderate risk structure fires will have a response of 16 CFD personnel, and high risk structure fires will have a response of 19 CFD personnel. Three personnel will respond to all low and moderate risk EMS incidents. Low and moderate risk technical rescue and hazardous materials (HazMat) incidents will receive three personnel; ten personnel will respond to high-risk technical rescue and HazMat incidents (CFD, 2017). Average response times for the CFD

are presented in Table 3.12-2. As shown in Table 3.12-2, as of 2021, the CFD did not meet or exceed its response-time goals, as it has in past years. While the CFD has not met response time goals as of 2021, the Department has recently opened a new station (Station 6) for commission. Station 6 opened in August of 2022, and allows the CFD to serve more people within their jurisdiction at a faster rate (CFD, 2021).

The proposed Project would introduce new residential uses to the City (i.e. 605 single-family residences). This would create an increased demand for fire services compared to existing conditions. The City's Existing General Plan designates the Development Area as Rural Residential (RR) and therefore, anticipated potential development. Although a General Plan Amendment would be required as part of the proposed Project, to the extent that the Project would have an incremental increase in demand on fire services provided by the CFD, the Project would be required to pay the community facility fee in accordance with Clovis Municipal Code Chapter 4.10, Fire Facility Development Impact Fee. The fee is imposed on residential development within the City for the purposes of assuring that the current level of service goals of the City are met with respect to additional demands placed on fire facilities from such development.

The Project does not propose and would not create a need for new or physically altered fire protection facilities to maintain acceptable service ratios, response times, or other performance objectives. Development fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. In addition, the Project Site would be required to annex into the city of Clovis Public Safety Community Facilities District. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with fire protection services. Therefore, the impact of the proposed Project on the need for additional fire services facilities is **less than significant** and would not require the construction of additional fire department facilities.

Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project is located within the service boundaries of the CUSD. Specifically, the Project site is nearest to Woods Elementary, approximately one mile southwest of the Project site, and Buchanan High School, approximately 1.7 miles southwest of the Project site.

The proposed Project would provide up to 605 residential units, which would directly cause population growth, including school-aged children that would attend the schools that serve the Project site and surrounding area. Utilizing the student generation rates provided by the CUSD in the Development Fee Justification Study/School Facilities Needs Analysis (dated April 2022), the

proposed Project would be expected to generate roughly 342 new students[5], broken down by grades as follows:

- TK–6: 205 students
- 7-8: 48 students
- 9-12: 90 students

Students within the Project site would most likely attend Woods Elementary and Buchanan High School, as they are the closest educational locations to the Project site. However, student placement is subject to CUSD's determination.

The CUSD's school building capacity was determined to be 21,916 for grades TK-6, 6,561 for grades 7-8, and 12,135 for grades 9-12. The CUSD does not have existing capacity to accommodate projected students from new development. Therefore, the CUSD will need additional school facilities during the next five years for approximately 2,339 students in grades TK-6, 496 students in grades 7-8, and 1,034 students in grades 9-12. The CUSD currently owns four elementary school sites (Fowler-McKinley, Minnewawa-Perrin, Minnewawa-International, and an elementary site in the Millerton Specific Plan Area) as well as the Bradley Educational Center site, which would accommodate a future high school, intermediate school, and elementary school. The CUSD, therefore, has school site capacity for all projected students in all grade levels, and thus no site acquisition costs are needed. (Odell, 2022).

School districts are authorized to collect fees on new residential and commercial/industrial development in accordance with Education Code Section 17620 and Government Code Section 65995. This Development Fee Justification Study/School Facilities Needs Analysis provides the information and analysis necessary to demonstrate that the CUSD is justified in collecting Level I fees on new residential and commercial/industrial development ($4.79 and $0.78 per square foot, respectively), and Level II and Level III fees of $5.36 per square foot and $10.73 per square foot for residential development, respectively. (Odell, 2022). The CUSD adopted Level I and II School Facilities (Developer) Fees in June 2022 (CUSD, 2022B). The development fees collected by the CUSD may be used for construction and reconstruction of school facilities, site development, relocatable classrooms on existing or future sites and other facilities necessitated by students generated by new development (Odell, 2022).

Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from taxes, would fund capital and labor costs associated with school services. The adequacy

[5]Calculations based on the CUSD Development Fee Justification Study/School Facilities Needs Analysis (2022), which states that Single family residential development generates an average of 0.3395 students grades TK-6; 0.0793 students for grades 7-8; and 0.1473 students for grades 9-12 per unit.

of fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund improvements associated with school services. According to Government Code Section 65996, the development fees authorized by SB 50 (1998) are deemed to be "full and complete school facilities mitigation" for any demands or impacts on school facilities caused by new development Therefore, the impact of the proposed Project on the need for additional school facilities is **less than significant**.

Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities. (Less than Significant)

The proposed Project will bring residents to the area which may require the use of other public services such as libraries, civic centers, etc. Public services such as the Clovis branch of the Fresno County Public Library and the Clovis Senior Center would serve Project residents. The City collects impact fees from new development based upon projected impacts from each development, including impacts on other public services as required by Chapter 3.10, Development Impact Fees and Chapter 7.8, Library Facilities Development Impact Fees of the City's Municipal Code. The City reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with services provided. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with these other public services.

The proposed Project does not trigger the need for new facilities associated with other public services. Consequently, new facilities for other public services are not proposed at this time. The proposed Project would not result in the need for new facilities for other public services, thus it will have a **less than significant** impact relative to this topic.

Impact 3.12-5: The proposed Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project directly increases the number of persons in the area as a result of new residential development. The proposed Project provides 605 single-family residential units. According to the most recent Department of Finance (2022) estimates, the average number of persons residing in a dwelling unit in the City of Clovis is 2.81; therefore, the Project is estimated to increase the population by 1,700 residents (based on 2.81 persons per household).

The City's General Plan identifies a park standard based on a goal of four acres of parkland per 1,000 residents within the City limits. The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000

people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a **less than significant** impact.

Impact 3.12-6: The proposed Project has the potential to 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. (Less than Significant)

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site, and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a **less than significant** impact relative to this topic.

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This section of the EIR analyzes the potential impacts of the proposed Project on the surrounding transportation system including roadways, bicycle/pedestrian facilities, rail, and transit facilities/services. This section identifies the significant impacts of the proposed Project. An evaluation of vehicular access to the proposed Project is also provided. All technical calculations are in the Transportation Analysis Report prepared by LSA for the proposed Project (provided in Appendix I of this EIR).

Comments were received during the public review period or scoping meetings for the Notice of Preparation regarding this topic. Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.13.1 INTRODUCTION

PROJECT LOCATION

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-3 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

PROJECT SITE DEFINED

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

3.13 TRANSPORTATION AND CIRCULATION

STUDY AREA

The Local Transportation Analysis (LTA) for the project examines traffic operations in the vicinity of the proposed Project under the following five scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term Plus Project Conditions
- Cumulative without Project Conditions
- Cumulative Plus Project Conditions

Traffic conditions at study intersections and roadway segments were examined for weekday a.m. and p.m. peak-hour conditions. The a.m. peak hour is defined as the 1 hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is the 1 hour of highest traffic volumes occurring between 4:00 p.m. and 6:00 p.m. Additionally, since the Project is estimated to be completed in 2028, the Near-Term condition was evaluated for the year 2028.

As per the City's Transportation Impact Analysis (TIA) Guidelines, the extent of the 'Study Area' includes the following:

- Pedestrian, bicycle, and transit facilities within 0.5 mile from the project site boundary
- All intersections of major streets that would provide direct access to the Project
- All signalized intersections within 0.5 mile of the Project site boundary where the project would add 50 or more peak-hour trips, and signalized intersections beyond 0.5 mile where the project would add 100 or more peak-hour trips
- All unsignalized intersections within a 0.5 mile of the project site boundary where the project would add more than 50 peak-hour trips

Based on the aforementioned criteria and as per discussion with the City and adjacent jurisdictions during the scoping agreement process, the following intersections and roadway segments have been included in the LTA. Figure 3.13-1 illustrates the Study Area Roadway Classifications.

Study Intersections

Twenty-six existing intersections were selected for study. The study intersections include:

1. Willow Avenue/Behymer Avenue (Clovis/Fresno)
2. Willow Avenue/Shepherd Avenue (Clovis/ Fresno)
3. Minnewawa Avenue/Behymer Avenue (Clovis)
4. Minnewawa Avenue/Shepherd Avenue (Clovis)
5. Clovis Avenue/Shepherd Avenue (Clovis)
6. Clovis Avenue/Teague Avenue (Clovis)
7. Clovis Avenue/Nees Avenue (Clovis)
8. Clovis Avenue/Alluvial Avenue (Clovis)

9. State Route 168 (SR-168) Westbound Ramps/Herndon Avenue (Caltrans)
10. SR-168 Eastbound Ramps/Herndon Avenue (Caltrans)
11. Clovis Avenue/Herndon Avenue (Clovis)
12. Sunnyside Avenue/Behymer Avenue (Clovis)
13. Sunnyside Avenue/Shepherd Avenue (Clovis)
14. Sunnyside Avenue/Teague Avenue (Clovis)
15. Sunnyside Avenue/Nees Avenue (Clovis)
16. Fowler Avenue/Behymer Avenue (Clovis)
17. Fowler Avenue/Ticonderoga (Clovis)
18. Fowler Avenue/Shepherd Avenue (Clovis)
19. Fowler Avenue/Teague Avenue (Clovis)
20. Fowler Avenue/Nees Avenue (Clovis)
21. Fowler Avenue/SR-168 Westbound Ramps (Caltrans)
22. Fowler Avenue/SR-168 Eastbound Ramps (Caltrans)
23. Sunnyside Avenue/Project Driveway 1 (Clovis)
24. Sunnyside Avenue/Project Driveway 2 (Clovis)
25. Project Driveway 3/Shepherd Avenue (Clovis)
26. Project Driveway 4-Stanford Avenue/Perrin Road (Clovis)

Roadway Segments

Twenty-three roadway segments were analyzed in the LTA. The roadway segments include:

1. Behymer Avenue, between Willow Avenue and Minnewawa Avenue (Clovis)
2. Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (Clovis)
3. Behymer Avenue, between Sunnyside Avenue and Fowler Avenue (Clovis)
4. Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (Clovis)
5. Shepherd Avenue, between Minnewawa Avenue and Clovis Avenue (Clovis)
6. Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (Clovis)
7. Shepherd Avenue, between Sunnyside Avenue and Project Driveway 3 (Clovis)
8. Shepherd Avenue, between Project Driveway 3 and Fowler Avenue (Clovis)
9. Herndon Avenue, between State Route 168 Eastbound Ramps and Clovis Avenue (Clovis)
10. Willow Avenue, between Behymer Avenue and Shepherd Avenue (Clovis/Fresno)
11. Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (Clovis)
12. Clovis Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
13. Clovis Avenue, between Teague Avenue and Nees Avenue (Clovis)
14. Clovis Avenue, between Nees Avenue and Alluvial Avenue (Clovis)
15. Clovis Avenue, between Alluvial Avenue and Herndon Avenue (Clovis)
16. Sunnyside Avenue, between Project Driveway 1 and Shepherd Avenue (Clovis)
17. Sunnyside Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
18. Sunnyside Avenue, between Teague Avenue and Nees Avenue (Clovis)
19. Fowler Avenue, between Behymer Avenue and Ticonderoga (Clovis)

20. Fowler Avenue, between Ticonderoga and Shepherd Avenue (Clovis)
21. Fowler Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
22. Fowler Avenue, between Teague Avenue and Nees Avenue (Clovis)
23. Fowler Avenue, between Nees Avenue and State Route 168 Westbound Ramps (Clovis)

For each roadway segment, the highest volume on any part of the segment has been considered as the analysis volume for the entire segment.

STUDY SCENARIOS

The study intersections were evaluated for the following five scenarios:

1. ***Existing Conditions*** – Analyzes operations as they exist today.
2. ***Existing Plus Project Conditions*** – Analyzes existing operations with the addition of trips generated from the Development Area.
3. ***Near-Term Plus Project Conditions*** – Analyzes cumulative year volumes with the addition of trips generated from the Development Area in the near-term (2028)
4. ***Cumulative No Project Conditions*** – Analyzes cumulative year volumes based on the forecast volumes obtained from the Fresno Council of Governments.
5. ***Cumulative Plus Project Conditions*** – Analyzes cumulative year volumes with the addition of trips generated from the Development Area in the long-term (2046).

3.13.2 ANALYSIS METHODOLOGY

DATA COLLECTION

Traffic volumes for Existing Conditions are typically developed using existing count data collected at Study Area intersections and roadway segments.

Traffic volumes under Near-Term Plus Project Conditions were developed by adding traffic volumes from approved and pending projects located near the Study Area and Project traffic to existing traffic volumes.

Traffic volumes for cumulative year without project conditions were developed by using forecast volumes obtained from the Fresno COG ABM. The methodology to develop cumulative year without project traffic volumes at Study Area intersections and roadway segments were consistent with the COG's procedures for post-processing of modeled traffic volumes. The resulting intersection and roadway segment LOS will be calculated using the previously discussed methodologies.

Existing and Cumulative year Plus Project traffic volumes were developed by adding Project traffic to the traffic volumes for the corresponding without Project scenarios.

VMT ANALYSIS METHODOLOGY

On December 28, 2018, the California Office of Administrative Law cleared the revised CEQA Guidelines for use. Among the changes to the CEQA Guidelines was the removal of vehicle delay

and LOS from consideration under CEQA. With the adopted CEQA Guidelines, transportation impacts are to be evaluated based on a project's effect on VMT. The City's TIA Guidelines includes screening criteria, VMT analysis methodology, VMT impact thresholds, and VMT mitigation measures. Therefore, the City's TIA Guidelines were used in the evaluation of the Project's VMT analysis.

VMT METHODOLOGY

The TIA Guidelines provide multiple project types and thresholds for land use projects. The Project was compared with the screening criteria established in the "Project Screening" section of the TIA Guidelines to check if the project can be screened out. The following is a brief description of the project in relation with the project screening criteria:

Small Project: The TIA Guidelines states that projects generating less than 500 daily trips could be screened out of a detailed VMT analysis. As discussed in Section 6.1, Project Trip Generation, the project is estimated to generate 5,705 daily trips. Therefore, the Project does not satisfy this screening criteria.

- **Provision of Affordable Housing:** The project proposes to develop market-rate, single-family dwelling units. Therefore, this screening criteria does not apply to the project.
- **Local-Serving Retail:** The project consists of residential land use only; therefore, this screening criteria does not apply to the project.
- **Project Located in a High-Quality Transit Area (HQTA):** The project is not located within an HQTA; therefore, this screening criteria does not apply to the project.
- **Project Located in Low VMT Area:** The project is not located in a low VMT area; therefore, this criteria does not apply to the project.

As shown above, the Project could not be screened out from a detailed VMT analysis. As such, pursuant to the TIA Guidelines, a detailed VMT analysis was conducted to assess the Project's VMT impact.

THRESHOLDS OF SIGNIFICANCE

The Project consists of residential land use. The TIA Guidelines established VMT per capita as the appropriate metric to evaluate residential land use projects while defining Fresno County as the "region" for determining VMT thresholds. The Project would have a significant VMT impact if the baseline Project VMT per capita is greater than 87 percent of the baseline Fresno County VMT per capita. Based on the TIA Guidelines, baseline City of Clovis VMT per capita is 16.1 and the corresponding threshold is 14.1 (which is 87 percent of 16.1). Therefore, the Project will have a significant VMT impact if the Project VMT per capita is greater than 14.1.

As recommended in the TIA Guidelines, the Fresno COG ABM was used for the Project VMT analysis. The model inputs were updated with the Project land uses to calculate Project VMT. The Project VMT was calculated from a Fresno COG ABM model run as described in the following sections.

LOCAL TRANSPORTATION ANALYSIS METHODOLOGY

Study intersections were analyzed using procedures and methodologies contained in the Highway Capacity Manual – 6th Edition (Transportation Research Board, 2016). These methodologies were applied using Synchro 11 software which considers traffic volumes, lane configurations, signal timings, signal coordination, and other pertinent parameters of intersection operations.

Level of Service (LOS)

The operational performance of the roadway network is commonly described with the term Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. For signalized intersections, roundabouts and all way stop control intersections, LOS is based on the average delay experienced by all vehicles passing through the intersection:

- **Signalized Intersections**
    - If the project triggers a signalized intersection operating at an acceptable LOS to operate at an unacceptable LOS;
    - If the project increases the average delay for average delay for a signalized intersection that is already operating at an unacceptable LOS.
- **Unsignalized Intersections**
    - If the project triggers an unsignalized intersection operating at acceptable LOS to operate at unacceptable LOS (from E or better to F) and meet the signal warrants criteria;
    - If the project increases the applicable delay for an unsignalized study intersection that is already operating at unacceptable LOS and meets the signal warrant criteria.

The City of Clovis considers LOS D as the LOS standard for study intersections and roadway segments under near-term conditions, unless a finding of overriding consideration was adopted in the City's General Plan EIR. The same criterion holds for long-term conditions, except for roadway segments that are adopted in the City's General Plan EIR to operate at LOS E or F. The City's TIA Guidelines do not define an LOS standard under Existing Plus Project conditions. For the purpose of this analysis, an LOS standard of D has been considered for intersections and roadway segments under Existing Plus Project conditions. The City of Clovis considers the following operational deficiency criteria for study intersections.

Per the City of Fresno Traffic Impact Study Report Guidelines, updated February 2009, LOS D is considered the LOS standard for study intersections and roadway segments under near-term conditions. The same criterion holds for long-term conditions, except for roadway segments that are adopted in the City's Master General Plan to operate at LOS E or F. The City's TIA Guidelines do not define an LOS standard under Existing Plus Project conditions.

It should be noted that all City of Fresno study intersections and roadway segments are located within the City of Fresno Traffic Impact Zone (TIZ) III. Per the City of Fresno's General Plan, all intersections and roadway segments within TIZ III should maintain a peak-hour LOS standard of D or better. Therefore, an LOS standard of D has been considered for intersections and roadway segments within Fresno for all analysis conditions. The City of Fresno considers the following operational deficiency criteria for study intersections:

- An operational deficiency is created if the addition of the Project traffic results in any one of the following:
    - Causes the intersection LOS to change from acceptable to unacceptable levels;
    - Causes the intersection LOS to change from an unacceptable LOS (LOS E) to LOS F;
    - Increases the average delay at a study intersection that is already operating at an unacceptable LOS.

City of Fresno's Traffic Impact Study guidelines do not define an operational deficiency criterion for roadway segments. Therefore, for purposes of this analysis, at intersections under City of Fresno jurisdiction, an operational deficiency has been considered when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) or when the project contributes to an existing or forecast deficiency.

Caltrans considers an acceptable LOS to be between LOS C and D at all intersections under its jurisdiction (delay of 45 seconds at signalized intersections). Caltrans does not have any operational deficiency criteria for study intersections. Therefore, an operational deficiency occurs when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) for intersections or when the project contributes to an existing or forecast deficiency. The project needs to identify improvements to improve the intersection LOS to an acceptable level.

Although LOS cannot be used as a CEQA metric to identify significant transportation impacts, intersection operations were analyzed for the proposed Project and are discussed in section 3.13.8, Impact Analysis.

3.13.3 EXISTING CONDITIONS

This subsection presents the existing bicycle, pedestrian, and transit facilities as well as intersection operations under Existing Conditions.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

The vision of the City of Clovis Active Transportation Plan (ATP), updated January 2022, is a "City with a complete and connected network of trails, walkways, and bikeways that provides convenient and intuitive connections to key destinations and supports travel within and between neighborhoods. The network improves quality of life by encouraging walking and bicycling for transportation and recreation." The ATP identifies different strategies to improve safety and

accessibility for active modes of transportation such as walking and biking. There are four different types of bicycle facilities in the City:

1. Class I Bikeway: Trails
2. Class II Bikeway: Bicycle Lanes
3. Class II Bikeway: Buffered Bicycle Lanes
4. Class III Bikeway: Bicycle Routes

One of the long-term visions of the City includes upgrading existing or recommended Class II Bicycle Lanes and Buffered Bicycle Lanes to Class IV Separated Bicycle Lanes.

Figures 3.13-2 and 3.13-3 illustrate the existing and proposed bicycle facilities within the City. At present, Class II bicycle lanes exist along Clovis Avenue, Willow Avenue, and some segments of Shepherd Avenue and Fowler Avenue within the Study Area. However, as shown in Figure 3.13-3, different bicycle facilities are proposed along other roadways within the Study Area, such as Sunnyside Avenue, Teague Avenue, Nees Avenue, and Alluvial Avenue.

PEDESTRIAN

The City has an extensive pedestrian network, with sidewalks along most of the major roads. However, since a portion of the Study Area falls within recently incorporated areas of the City, sidewalks are not present because they were previously developed as per unincorporated Fresno County design guidelines. Figure 3.13-4 illustrates the existing sidewalk facilities within the City of Clovis.

The City's ATP has identified improvements to the pedestrian network based on a citywide sidewalk network gap analysis. Additionally, several potential locations have been identified to install mid-block crossings to improve trail connectivity throughout Clovis. Two trails (i.e., the Dry Creek Trail and the Enterprise Trail) currently exist within the Study Area. However, additional trails are being proposed in the Study Area with potential mid-block crossings.

TRANSIT SERVICE

Clovis Transit Stageline Routes 10 and 80 operate within the Study Area. Route 10 operates from Monday through Saturday, while Route 80 operates only on school days, based on the Clovis Unified School District schedule. Route 10 provide access to Fresno State University and Route 80 provides access to the Buchanan Education Complex. Fresno Area Express (FAX) operates within the Study Area along Willow Avenue 7 days a week. The route connects communities in Fresno to the different campuses of Clovis Community College. In addition to fixed route services, Round Up is the Clovis paratransit service for disabled City residents. Round Up transit vehicles are all accessible in accordance with the Americans with Disabilities Act (ADA) standards.

EXISTING INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Existing Conditions using the methodologies previously discussed. Existing Signal timing Sheets were obtained from the City and Caltrans for all signalized analysis intersections. The signal timing sheets are included in Appendix C of the

Transportation Impact Report (Appendix I of this EIR). It should be noted that the existing signal timings were utilized to analyze traffic operations under near-term and cumulative (2046) scenarios as a conservative approach. Table 8-A summarizes the results of this analysis and shows that the following intersections operate at an unsatisfactory LOS under existing conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Fowler Avenue/Shepherd Avenue (a.m. peak hour only)
- Fowler Avenue/State Route 168 Eastbound Ramps (p.m. peak hour only)

All other study intersections operate at a satisfactory LOS under existing conditions.

A roadway segment LOS analysis was conducted for Existing Conditions using the methodologies previously discussed. Table 8-B summarizes the results of this analysis and shows that all the study roadway segments currently operate at a satisfactory LOS under existing conditions.

Technical calculations are displayed in Appendix E of the Transportation Analysis Report prepared by LSA for the proposed Project (contained within Appendix I of this EIR).

3.13.4 EXISTING PLUS PROJECT CONDITIONS

PROJECT TRIP GENERATION

The trip generation for the proposed Project was developed using rates from the *Trip Generation Manual 11th Edition* (Institute of Transportation Engineers, 2021) for Land Use 210 – "Single-Family Detached Housing." Table 3.13-3 summarizes the project trip generation. As shown in Table 6-A, the Project is anticipated to generate 424 trips in the a.m. peak hour, 569 trips in the p.m. peak hour, and 5,705 daily trips.

TABLE 3.13-3: PROJECT TRIP GENERATION

LAND USE	*UNITS*	*AM PEAK HOUR*			*PM PEAK HOUR*		
		IN	*OUT*	*TOTAL*	*IN*	*OUT*	*TOTAL*
Single-Family Residential Detached Housing (ITE 210)	605 DU	109	315	424	357	212	569

NOTES: TRIP GENERATION IS BASED ON TRIP RATES PUBLISHED IN TRIP GENERATION MANUAL 11TH EDITION (INSTITUTE OF TRANSPORTATION ENGINEERS, 2021).
SOURCE: LSA, 2023

PROJECT TRIP DISTRIBUTION

The Project trip distribution was developed using select zone model runs obtained from the Fresno COG ABM. Appendix A of Transportation Impact Report (Appendix I of this EIR) includes the select zone model plots for the proposed Project. Figure 3.14-5 illustrates the Project trip distribution. The Project trip generation was applied to the corresponding trip distribution pattern to develop the Project trip assignment. Figure 3.14-6 illustrates the Project trip assignment.

EXISTING PLUS PROJECT INTERSECTION OPERATIONS

Analysis of the existing with Project scenario is provided to identify direct Project-related operational deficiency if the Project were to be built and in operation today. This scenario eliminates the effects of ambient growth and other cumulative projects and deals specifically with operational deficiencies only due to the Project traffic. Figure 3.13-7 illustrates the study intersection geometrics and traffic control under all 'plus Project' scenarios.

An intersection LOS analysis was conducted for Existing Plus Project Conditions using the methodologies previously discussed. The following intersections are forecasted to operate at an unsatisfactory LOS under Existing Plus Project conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Sunnyside Avenue/Shepherd Avenue (p.m. peak hour only)
- Sunnyside Avenue/Nees Avenue (p.m. peak hour only)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/State Route 168 Eastbound Ramps (p.m. peak hour only)

Based on the operational deficiency criteria stated in Section 3.2 of this TIA, the Project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under Existing Plus Project conditions.

It should be noted that out of the five intersections forecasted to operate at a deficient LOS, three intersections are currently operating at a deficient LOS. As such, the Project is forecast to add to the existing deficiencies at these intersections.

A roadway segment LOS analysis was conducted for Existing Plus Project Conditions using the methodologies previously discussed. Table 8-B summarizes the results of this analysis and shows that all study roadway segments are forecasted to operate at a satisfactory LOS under Existing Plus Project conditions.

3.13.5 NEAR-TERM CUMULATIVE (2028) CONDITIONS ANALYSIS

A Near-Term Cumulative Conditions analysis was performed to identify potential impacts of the Project under Cumulative AM and PM peak hour conditions. The analysis reflects near-term development in the City of Clovis and other nearby jurisdictions.

NEAR-TERM PLUS PROJECT INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Near-term Plus Project conditions using the methodologies previously discussed. The following intersections are forecasted to operate at an unsatisfactory LOS under near-term plus project conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)

- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (p.m. peak hour only)
- Clovis Avenue/Herndon Avenue (p.m. peak hour only)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)

Based on the operational deficiency criteria stated in Section 3.2 of the Transportation Impact Report (as provided in Appendix I of this EIR), the Project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under Near-Term Plus Project conditions.

3.13.6 CUMULATIVE (2046) CONDITIONS ANALYSIS

A Cumulative Conditions analysis was performed to identify potential impacts of the Project under Cumulative AM and PM peak hour conditions. The analysis reflects long-term development in the City of Clovis and other nearby jurisdictions.

CUMULATIVE NO PROJECT INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Cumulative Without Project conditions using the methodologies previously discussed. The following intersections are forecasted to operate at an unsatisfactory LOS under Cumulative Without Project conditions:

- Willow Avenue/Shepherd Avenue (p.m. peak hour only)
- Minnewawa Avenue/Behymer Avenue (a.m. and p.m. peak hours)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Teague Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only).

All other study intersections are forecasted to operate at a satisfactory LOS under Cumulative (2046) Without Project conditions.

A roadway segment LOS analysis was conducted for cumulative without project conditions using the methodologies previously discussed. Table 8-F summarizes the results of this analysis and shows

that the following roadway segments are forecast to operate at an unsatisfactory LOS under Cumulative Without Project conditions:

- Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (a.m. peak hour only)
- Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (p.m. peak hour only)
- Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue, between Shepherd Avenue and Project Driveway 1 (a.m. and p.m. peak hours)
- Fowler Avenue, between Ticonderoga and Shepherd Avenue (a.m. and p.m. peak hours).

All other roadway segments are forecasted to operate at a satisfactory LOS under cumulative without project conditions.

CUMULATIVE PLUS PROJECT INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Cumulative Plus Project Conditions using the methodologies previously discussed. The following intersection is forecasted to operate at an unsatisfactory LOS under Cumulative Plus Project Conditions:

- Willow Avenue/Shepherd Avenue (p.m. peak hour only)
- Minnewawa Avenue/Behymer Avenue (a.m. and p.m. peak hours)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Alluvial Avenue (a.m. peak hour only)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Teague Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)
- Sunnyside Avenue/Project Driveway 1 (a.m. and p.m. peak hours)
- Sunnyside Avenue/Project Driveway 2 (a.m. and p.m. peak hours)

Based on the operational deficiency criteria, the Project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under cumulative plus project conditions. It should be noted that out of the 14 intersections forecast to operate at a deficient LOS, 11 intersections forecast to operate at a deficient LOS under cumulative (2046) without project conditions. As such, the project is forecast

to add to the forecasted deficiencies at these 11 intersections. Detailed intersection LOS worksheets are included in Appendix I.

A roadway segment LOS analysis was conducted for cumulative plus project conditions using the methodologies previously discussed. Table 8-F summarizes the results of this analysis and shows that the following roadway segments are forecast to operate at an unsatisfactory LOS under Cumulative Plus Project Conditions:

- Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (a.m. peak hour only)
- Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (a.m. and p.m. peak hours)
- Shepherd Avenue, between Sunnyside Avenue and Project Driveway 3 (p.m. peak hour only)
- Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue, between Shepherd Avenue and Project Driveway 1 (a.m. and p.m. peak hours)
- Fowler Avenue, between Ticonderoga and Shepherd Avenue (a.m. and p.m. peak hours)

Based on the operational deficiency criteria, the Project is forecasted to create an operational deficiency at these roadway segments. All other roadway segments are forecasted to operate at a satisfactory LOS under Cumulative Plus Project Conditions. It should be noted that out of the seven roadway segments forecast to operate at a deficient LOS, six segments are forecast to operate at a deficient LOS under Cumulative (2046) Without Project Conditions. As such, the Project is forecast to add to the forecasted deficiencies at these six roadway segments.

3.13.7 REGULATORY SETTING

Existing transportation polices, laws, and regulations that would apply to the proposed Project are summarized below. This information provides a context for the impact discussion related to the Project's consistency with applicable regulatory conditions and development of significance criteria for evaluating Project impacts.

STATE

Senate Bill 743

Senate Bill (SB) 743 was signed into law in 2013 and is leading to substantial changes in the way transportation impact analyses are being prepared. Notably, it precludes the use of level of service (LOS) to identify significant transportation impacts in CEQA documents for land use projects, recommending instead that VMT be used as the preferred metric. On December 28, 2018, the CEQA Guidelines were amended to add Section 15064.3, Determining the Significance of Transportation

Impacts, which states that generally, VMT is the most appropriate measure of transportation impacts. According to 15064.3(a), "Except as provided in subdivision (b)(2) (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact." Beginning on July 1, 2020, the provisions of 15064.3 applied statewide.

To aid in SB 743 implementation, OPR released a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) in December 2018. The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement the SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches.

The Technical Advisory identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT:

1. **Small projects** – projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.

2. **Projects near major transit stops** – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.

3. **Affordable residential development** – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.

4. **Local-serving retail** – local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant).

5. **Projects in low VMT areas** – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects. The residential threshold is described below.

1. Residential development that would generate vehicle travel exceeding 13 percent below existing (baseline) residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.

LEVEL OF SERVICE (LOS)

As previously noted, LOS may no longer be used to identify significant transportation impacts in CEQA documents for land use projects. However, this analysis includes a LOS analysis to determine if the proposed Project would result in deficient intersection operations per the City of Clovis standards. Policy 2.1 of the General Plan strives for LOS D or better.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to an evaluation of the visual quality of the Project site. The policies applicable to the Project are identified below:

POLICIES: CIRCULATION ELEMENT

1. Policy 1.1. Multimodal network. The city shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.
2. Policy 1.2. Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
3. Policy 1.3. Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
4. Policy 1.4. Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.
5. Policy 1.5. Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).
6. Policy 1.6. Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
7. Policy 1.7. Narrow streets. The City may permit curb-to-curb dimensions that are narrower than current standards on local streets to promote pedestrian and bicycle connectivity and enhance safety.
8. Policy 2.1. Level of service. The following is the City's level of service (LOS) standards:
    A. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hours.
    B. Allow exceptions on a case-by-case basis where lower levels of service would result in other public benefits, such as:
        i. Preserving agriculture or open space land;
        ii. Preserving the rural/historic character of a neighborhood;
        iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts;
        iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders;

v. Where right-of-way constraints would make capacity expansion infeasible.

9. Policy 2.2. Fair share costs. New development shall pay its fair share of the cost for circulation improvements in accordance with the city's traffic fee mitigation program.
10. Policy 2.3. Right-of-way dedication. The city may require right-of-way dedication essential to the circulation system in conjunction with any development or annexation. The City shall request the County of Fresno to apply the same requirements in the Clovis planning area.
11. Policy 3.1. Traffic calming. Employ traffic-calming measures in new developments and existing neighborhoods to control traffic speeds and maintain safety.
12. Policy 3.4. Road diets. Minimize roadway width as feasible to serve adjacent neighborhoods while maintaining sufficient space for public safety services.
13. Policy 3.5. Roadway widening. Only consider street widening or intersection expansions after considering multimodal alternative improvements to non-automotive facilities.
14. Policy 3.6. Soundwalls. Design roadway networks to disperse traffic to minimize traffic levels. Discourage soundwalls along new collector and local streets when feasible.
15. Policy 3.7. Conflict points. Minimize the number of and enhance safety at vehicular, pedestrian, and bicycle conflict points.
16. Policy 3.8. Access management. Minimize access points and curb cuts along arterials and prohibit them within 200 feet of an intersection where possible. Eliminate and/or consolidate driveways when new development occurs or when traffic operation or safety warrants.
17. Policy 3.9. Park-once. Encourage "park-once" designs where convenient, centralized public parking areas are accompanied by safe, visible, and well-marked access to sidewalks and businesses.
18. Policy 3.10. Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.
19. Policy 3.11. Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.
20. Policy 3.12. Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets and encourage pedestrian and bicycle access.
21. Policy 5.2. Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
22. Policy 5.3. Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
23. Policy 5.4. Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
24. Policy 5.5. Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity.

City of Clovis Active Transportation Plan

The Clovis Active Transportation Plan is a comprehensive guide that supports walking, bicycling, transit, and use of other emerging modes of personal transport as alternatives to driving within Clovis, to neighboring cities, and regional destinations. The Plan identifies strategies to improve safety and accessibility for active forms of travel such as walking and bicycling and proposes a framework for implementing projects, programs, and policies.

Fresno County Regional Transportation Plan

Fresno Council of Government's (Fresno COG's) 2022 Regional Transportation Plan (RTP) comprehensively assesses all forms of transportation available in Fresno County as well as travel and goods movement needs through 2046.

Fresno County Regional Traffic Impact Fee

The Regional Transportation Impact Fee (RTIF) is a county-wide, multi-jurisdiction capital improvement funding program intended to cover a portion of the costs for new transportation facilities required to serve new development within the County.

3.13.8 THRESHOLDS OF SIGNIFICANCE

This section describes the thresholds or criteria that determine whether the Project causes a significant impact on the roadway, bicycle, pedestrian, rail, and/or transit systems. These thresholds are based on California Environmental Quality Act (CEQA), policies from the General Plans for the City of Clovis and Fresno County, and Caltrans policies. For the purposes of this Draft EIR, the Project would cause a significant impact if it would result in any of the following listed criteria:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
4. Result in inadequate emergency access.

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed Project would have a significant impact on transit, bicycles, or pedestrians if it would conflict with adopted policies, plans, or programs regarding these systems, or create or exacerbate disruptions to the performance or safety of these systems.

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts may also be significant if a

project results in inadequate emergency access. The proposed Project would have a significant impact on the transportation system if it would increase hazards due to a design feature, incompatible uses, or inadequate emergency access.

The existing General Plan includes a policy within the Transportation Element which requires maintenance of a level of service (LOS) D standard on City roadways, with some exceptions. Because LOS is no longer a CEQA significance metric, an analysis of LOS is provided for the purposes of policy consistency analysis.

3.13.9 IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Project implementation would not result in VMT increases that are greater than 87 percent of Baseline conditions. (Significant and Unavoidable)

The proposed development was evaluated against the screening criteria in OPR's Technical Advisory. The following criteria is applicable to residential developments.

1. Small projects – projects consistent with a Sustainable Communities Strategy and local general plan that generate or attract fewer than 110 trips per day.
2. Projects near major transit stops – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
3. Affordable residential development – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
4. Projects in low VMT areas – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The SB 743 Memorandum identifies the recommended numeric VMT thresholds for residential projects. Based on the VMT thresholds, a residential project would result in a less-than-significant transportation impact if:

5. Under existing (baseline) conditions, the residential development would generate home-based VMT per dwelling unit equal or below 87 percent of the existing (baseline) City of Clovis average for the same housing category (single family, multi-family, or age-restricted); and
6. Under cumulative conditions, the residential development would generate home-based VMT per dwelling equal or below 87 percent of the cumulative City of Clovis average for the same housing category (single family, multi-family, or age-restricted).

Alternatively, the project would result in a less-than-significant transportation impact if:

7. The residential development would cause the total VMT in the model area to decrease under baseline AND cumulative conditions.

The proposed development does not constitute a small project, is not located within ½ mile of an existing major transit stop and is not a redevelopment project. Therefore, the development is not eligible to be screened out based on these criteria.

A detailed VMT analysis was conducted using methodology discussed in Appendix I of this EIR. The proposed residential development would result in a significant transportation impact if it would 1). generate vehicle travel exceeding 87 percent of the established baseline VMT under existing (baseline) or cumulative conditions, or 2). result in an increase in total VMT in the model area.

Table 3.13-5 summarizes the regional threshold and Project VMT per capita. As shown in Table 3.13-5, the Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact.

TABLE 3.13-2: EXISTING (2019) REGIONAL AND PROJECT VMT PER CAPITA

REGION (FRESNO COUNTY)[1]	*PROJECT*	*DIFFERENCE*	*PERCENTAGE DIFFERENCE*
14.1	17.0	2.9	20.7%

NOTES: [1] THE CITY OF CLOVIS VMT PER CAPITA WAS OBTAINED FROM THE TRANSPORTATION IMPACT ANALYSIS GUIDELINES, CITY OF CLOVIS (SEPTEMBER 15, 2022)
VMT= VEHICLE MILES TRAVELED
SOURCE: FRESNO COUNCIL OF GOVERNMENTS' ACTIVITY-BASED MODE

When a lead agency identifies a significant CEQA impact, the agency must identify feasible mitigation measures in order to avoid or substantially reduce that impact. VMT impacts can be mitigated through more behavioral changes. Enforcement of mitigation measures will be subject to the mitigation monitoring requirements under CEQA, as well as the regular police powers of the agency. These measures can also be incorporated as a part of plans, policies, regulations, or project designs. Project design features that encourage mode shift from automobiles to transit or non-motorized modes can therefore help reduce Project VMT as well. Typically, VMT reduction and benefits from these Project design features are not accounted in the Project VMT calculations conducted using the regional travel demand model. Therefore, VMT reduction credit can be accounted for these design features similar to VMT mitigation measures to help reduce the Project's VMT impact.

Evaluation of VMT reductions should be evaluated using state-of-the-practice methodologies recognizing that many of the VMT mitigation strategies/project design features are dependent on building tenant performance over time. Following is a detailed description of both and the corresponding potential reduction that could be achieved with implementation of these measures.

PROJECT DESIGN FEATURES AND MITIGATION MEASURES

VMT reduction that can be achieved by the Project design features have been estimated using the most California Air Pollution Control Officers Association's (CAPCOA) "*Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity – Designed for Local Governments, Communities, and Project Developers*" dated December 2021. As per information provided by the Project Description, the Project intends to implement the following Project design features that will help reduce Project VMT.

- **Pedestrian Infrastructure:** The Project proposes to provide pedestrian improvements/sidewalks both internal to the Project site and along the Project frontage. Providing sidewalk/pedestrian improvements encourage people to walk instead of drive and thus reduces VMT. CAPCOA transportation measure **T-18: Provide Pedestrian Network Improvement** was used to estimate the VMT reduction due to Project related enhancements in pedestrian access and connectivity. The CAPCOA methodology requires existing sidewalk length in the Project study area in addition to the length of sidewalk being provided by the Project. In order to estimate the existing sidewalk length, a survey was conducted along the proposed Project frontage. Based on the survey, the Project study area includes approximately 10 miles of sidewalk. The Project proposes to add approximately another 2.3 miles of sidewalk/pedestrian access. Therefore, this measure may reduce the Project's VMT by approximately 1.17 percent.
- **Improve Street Connectivity:** The Project proposes to provide an internal circulation network. Projects with higher density of intersections would help increase street connectivity, reduce trip lengths, and promote use of alternative transportation modes of travel. CAPCOA handbook, identifies measure **T-17: Improve Street Connectivity** to evaluate Project street network. The measure is recommended as an appropriate design feature for plans within urban or suburban areas. The Project is located in suburban/rural area type setting, so this measure was explored as a potential VMT reduction design feature.

  Measure T-17 estimates that an increased density of vehicular intersections improves street connectivity and helps in reduction in GHG emissions and corresponding VMT. As included in the CAPCOA handbook, this measure could be applied to a project for:

  > *'Projects that increase intersection density would be building a new street network in a subdivision or retrofitting an existing street network to improve connectivity (e.g., converting cul-de-sacs or dead-end streets to grid streets)'.*

  The measure establishes the following numerical formula of VMT reduction due to increased intersection density and improved street connectivity:

$$A = \frac{B - C}{C} * D$$

  Where,

  A = Percent Reduction in GHG/VMT emission from vehicle Travel

  B = Intersection Density in project site with measure

C = Average Intersection Density for Typical developments (36)
D = Elasticity of VMT with respect to intersection density (-0.14)

The CAPCOA handbook establishes the variable C using an average density of intersections within a square mile in a typical development as included in the Proposed Trip Generation, Distribution, and Transit Mode Split Forecasts for the Bayview Waterfront Project Transportation Study, Fehr & Peers. 2009. This establishes the average suburban intersection density for the entire United States.

The CAPCOA handbook adapts the variable D, Elasticity of VMT with respect to intersection density from the report 'Does Compact Development Make People Drive Less?' published in the Journal of the American Planning Association, 2016, authored by Mark R. Stevens. The elasticity was determined from a meta-regression analysis from data of fifteen studies, having studied in different urban/suburban geographic regions within the Country.

While the increased intersection density helps facilitate greater number of short trips, the project consists of only single land use type (residential) and the amount of internal capture (trips that can be fulfilled within the project; with both origin and destinations within the project site) would be minimal. Also, CAPCOA suggests application of different VMT mitigation measures at different scales – project/site scale or community/plan scale. Based on CAPCOA handbook, this measure is applicable at a plan/community scale. However, this measure was explored as a VMT reduction design feature at a project scale with appropriate limitations as described below.

While all the internal intersections can be considered to estimate the VMT reduction due to increased street connectivity, given the above limitations (project location area type, single land use type, and CAPCOA applicability scale), only project driveways were reviewed for applicability for this measure. As indicated in section "1.1 – Project Description," the Project has four driveways (two on Sunnyside Avenue, one of Perrin Road, and one on Shepherd Avenue) for Project access. Except for the driveway on Shepherd Avenue, all other Project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out Left-In (RIROLI) driveway. However, all 4 Project driveways were considered as Project intersections for the mitigation purposes. The proposed Project site is approximately 77 acres. Therefore, the intersection density of the Project would be approximately 33.25 intersections per square mile.

Since Project intersection density is lower than the countrywide average intersection density of 36 intersections per square mile as identified in the CAPCOA handbook, no direct VMT reduction has been accounted for this Project design feature.

- **Bicycle Infrastructure/Improvements:** The Project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class I Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Similar to pedestrian facilities, these bicycle design features included in the Project can encourage increase active transportation mode share in the area. The CAPCOA manual was utilized to estimate the reduction of Project VMT due to proposed bicycle improvements. Specifically, CAPCOA transportation measure "T-19A: Construct or Improve Bike Facility" was deemed applicable to estimate the VMT reduction due to Project bicycle features. According to the measure, providing bicycle infrastructure helps to improve biking conditions within an area. This encourages a mode shift on the roadway parallel to the bicycle facility from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. Based on CAPCOA estimates, the Project bicycle design features have a potential to reduce up to 0.01 percent of the Project VMT.

- **Provide Electric Vehicle (EV) Parking and EV Charging Infrastructure:** Accessible EV parking and provision of charging for electric vehicles in the residential units will encourage the use of EVs. The latest California Green Building Standards (CALGreen), California Building Code, requires provision of infrastructure to accommodate electric vehicle chargers for new single-family and attached dwelling units/town houses. For new construction projects such as apartments, condos, hotels, and motels, CALGreen code requires the project to provide EV charging stations as a percentage of the total Project parking. While it is understood that provision of electric charging infrastructure/stations might not reduce VMT, it will reduce GHG, which can be considered equivalent to reduction in VMT. According to CAPCOA, provision of additional electric charging stations, in addition to CALGreen requirements, can be considered as a GHG/VMT mitigation. Provision of EV charging infrastructure has a potential to achieve a maximum VMT reduction of up to 11.9 percent. However, the Project is a single-family residential development and as such, doesn't propose to provide electric charging stations beyond the CALGreen code requirements. Additionally, there is no guarantee that residents would be using electric vehicles even if charging stations are available. As such, while this Project design feature has the potential to reduce GHG emissions, no direct VMT reduction has been accounted for this Project design feature.

Table 2-B in the Transportation Impact Report (Appendix I of this EIR) provides methodology, assumptions, and parameters used in the estimation/calculation of VMT reduction for the Project along with the potential amount of VMT reduction that can be achieved.

In conclusion, Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. A combination of measures from several VMT reduction strategies were incorporated into the Project design to achieve this VMT reduction as outlined above. This included strategies that are aimed at reducing the number

of automobile trips generated by the Project, shift more trips from automobile to non-automobile modes, and/or reduce the distances that people drive. Ultimately, however, the City of Clovis is a suburban community with land use characteristics that are more spread out when compared to dense urban communities. The land use and transportation characteristics of suburban communities such as Clovis, can make it difficult, or impossible to achieve VMT reductions to levels that the City has established as a goal, and ultimately, as a threshold of significance for CEQA analysis. The Project design features are estimated to offset some of the VMT impacts of the Project by reducing VMT by up to 1.18 percent, but this reduction will not reduce the impact to a less than significant level. Therefore, the Project will have a **significant and unavoidable** relative to this topic.

Impact 3.13-2: Project implementation may conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities. (Less than Significant)

The City of Clovis ATP (2022) and City of Clovis General Plan (2014) were reviewed to determine if the proposed Project results in any inconsistencies with adopted transportation related policies.

ACTIVE TRANSPORTATION PLAN (ATP)

At the present, Class II bicycle lanes exist along Clovis Avenue, Willow Avenue, and some segments of Shepherd Avenue and Fowler Avenue within the vicinity of the Project Site. Furthermore, two pedestrian trails (i.e., the Dry Creek Trail and the Enterprise Trail) currently exist within the vicinity of the Project site. However, additional trails are being proposed in the vicinity of the Project site with potential mid-block crossings.

The proposed Project will also construct sidewalks on internal streets, providing adequate connections to and throughout the site for pedestrians. As mentioned before, the Project proposes to provide pedestrian improvements/sidewalks both internal to the Project site and along the Project frontage. The Project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class II Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue.

CITY OF CLOVIS GENERAL PLAN

It is noted that the proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density.

Additionally, the proposed Project is consistent with policies identified in the Circulation Element of the City of Clovis General Plan, as described below:

Policies: Circulation Element

1. Policy 2.1. Level of service. The following is the City's level of service (LOS) standards:
    A. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hours.
    B. Allow exceptions on a case-by-case basis where lower levels of service would result in other public benefits, such as:
        i. Preserving agriculture or open space land;
        ii. Preserving the rural/historic character of a neighborhood;
        iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts;
        iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders;
        v. Where right-of-way constraints would make capacity expansion infeasible.
2. Policy 1.6. Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
3. Policy 2.2. Fair share costs. New development shall pay its fair share of the cost for circulation improvements in accordance with the city's traffic fee mitigation program.
4. Policy 3.6. Soundwalls. Design roadway networks to disperse traffic to minimize traffic levels. Discourage soundwalls along new collector and local streets when feasible.
5. Policy 3.10. Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.
6. Policy 3.12. Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets and encourage pedestrian and bicycle access.
7. Policy 5.2. Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
8. Policy 5.5. Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity.

As mentioned before, an analysis of the study intersections and roadway segments was performed to determine LOS as a result of Project implementation. Results of this analysis and shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Although LOS cannot be used as a CEQA metric to identify significant transportation impacts, intersection operations were analyzed for the proposed Project and are discussed in Chapters 8 and 9 of the Transportation Impact Analysis, included in Appendix I of this EIR. Improvements have been recommended at study intersections and roadway segments where an operational deficiency has

been identified based on the results of the LOS analysis. It should be noted that as shown in Tables 8-A, 8-C, and 8-E of the Traffic Impact Analysis, the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, as shown in Tables 10-B and 10-C of the Traffic Impact Analysis, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. As shown in Tables 9-C, and 9-D of the Traffic Impact Analysis, the intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, as shown in Tables 10-E and 10-F of the Traffic Impact Analysis, and discussed in chapter 10.0 of this report, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Table 9-E of Appendix E of the Transportation Impact Report (Appendix I of this EIR) summarizes the recommended improvements for roadway segments for all analysis scenarios. Tables 9-F and 9-G of the Transportation Impact Report (Appendix I of this EIR) summarize the post-improvement roadway segment LOS under near- term and cumulative conditions, respectively.

It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements described in those chapters, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered **less than significant**.

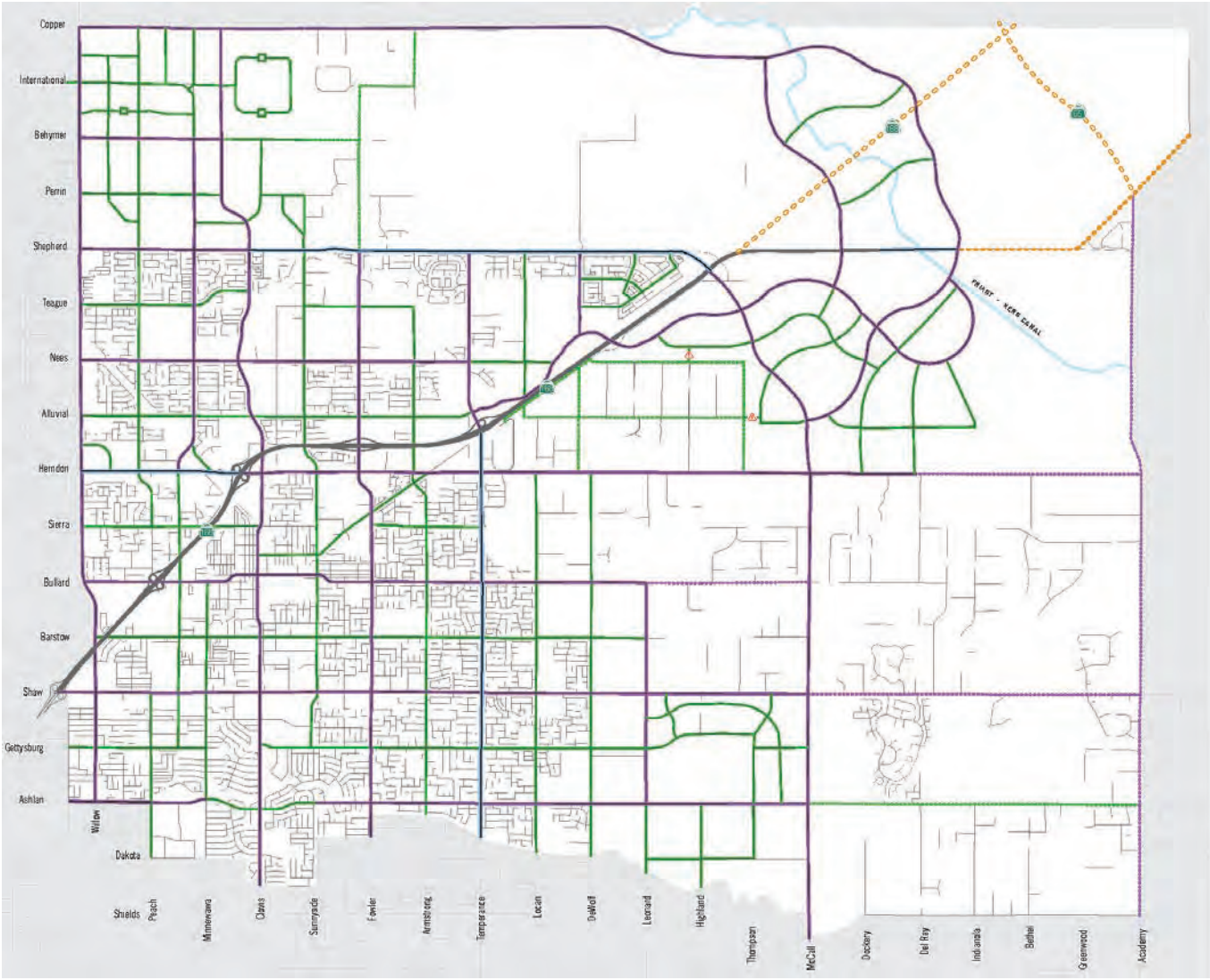
Impact 3.13-3: Project implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access. (Less than Significant)

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways as part of the Transportation Impact Report by LSA, included in Appendix I of this EIR. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, LSA recommends that a signal to be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be **less than significant** relative to this topic.



LSA

FIGURE 3.13-1

Shepherd North Project
Transportation Impact Analysis

City of Clovis Roadway Classification

SOURCE: Clovis General Plan, August 2014

I:\DNV2201\GIS\Reports\fig3-D_Rdwy Classification_Clovis.ai (12/16/2022)

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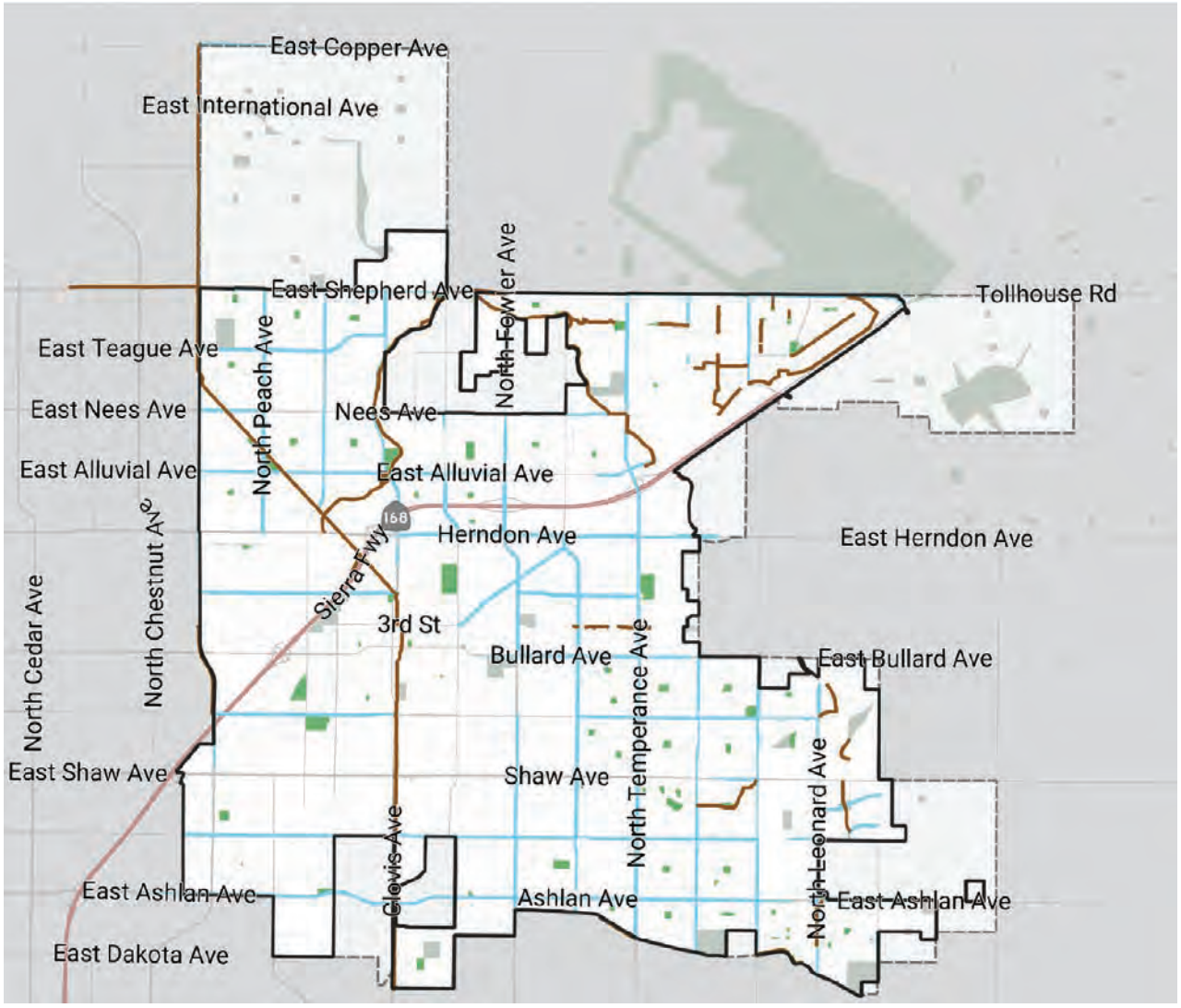

LSA

FIGURE 3.13-2

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing Bicycle Facilities

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
I:\DNV2201\GIS\Reports\fig4-4_Ex_Bike_Clovis.ai (2/8/2023)

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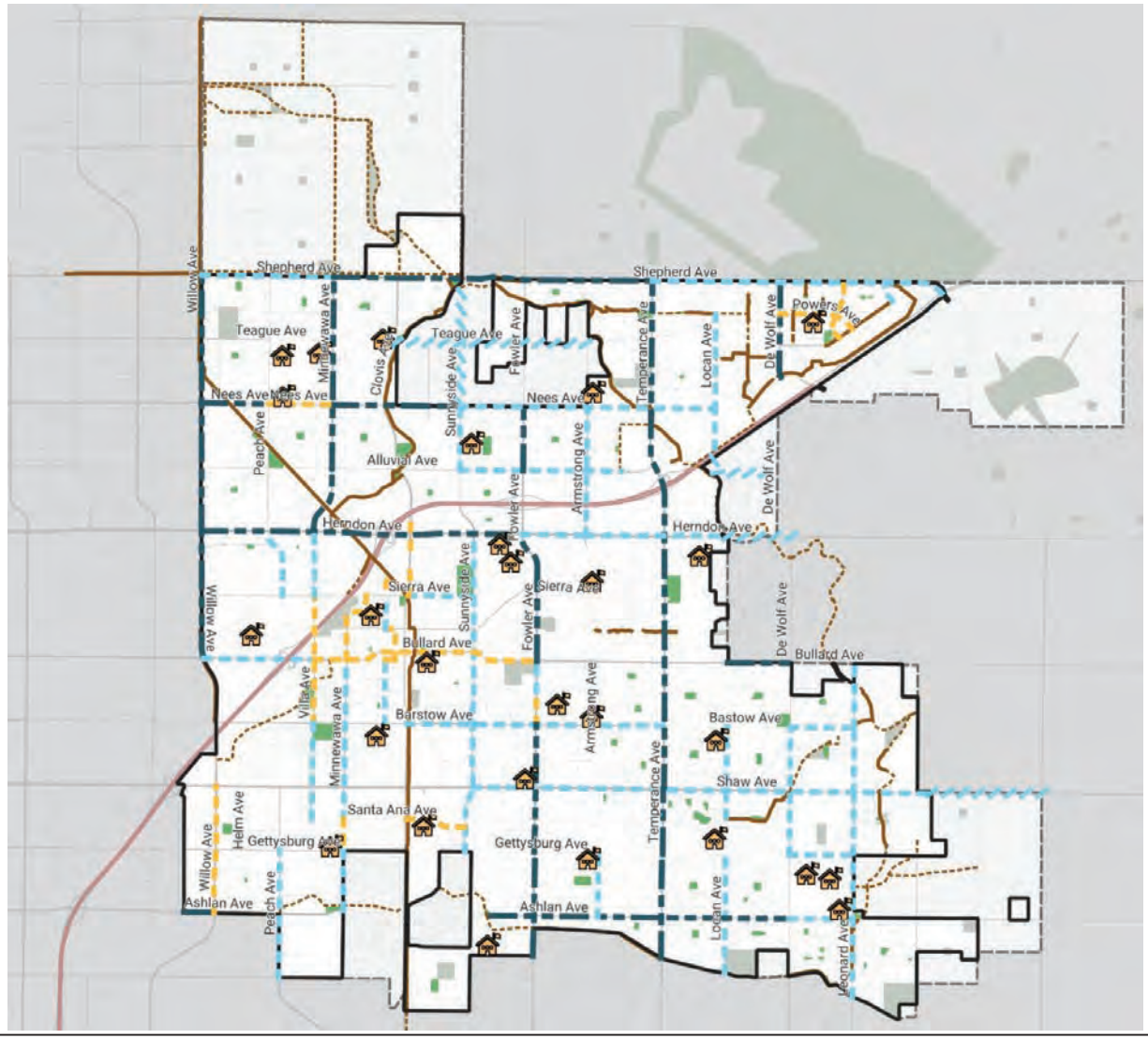

LSA

FIGURE 3.13-3

Shepherd North Project
Transportation Impact Analysis

City of Clovis Proposed Bicycle Facilities

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
I:\DNV2201\GIS\Reports\fig3-F_Bike_Proposed_Clovis.ai (12/16/2022)

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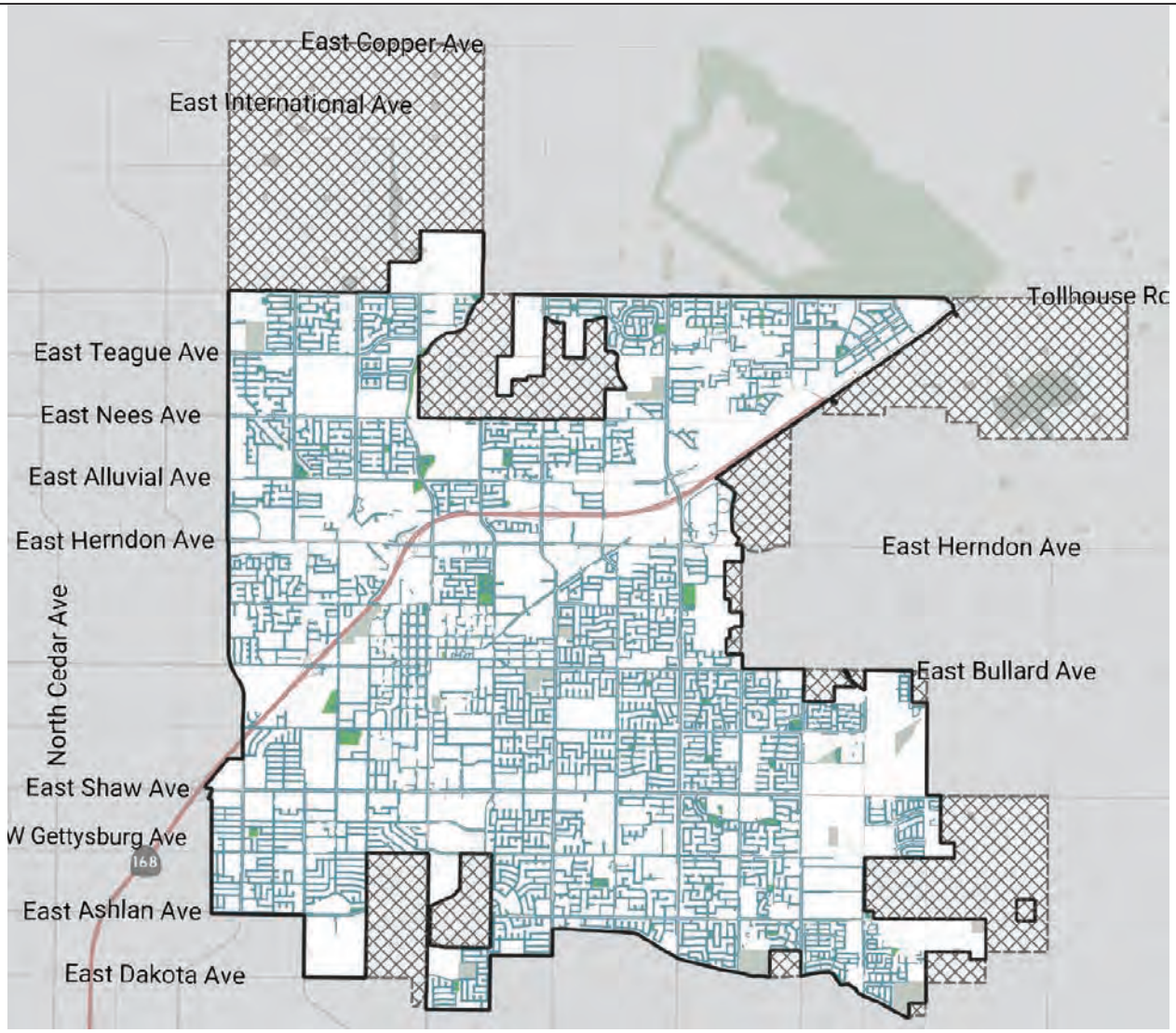

LSA

FIGURE 3.13-4

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing Sidewalks Facilities

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft

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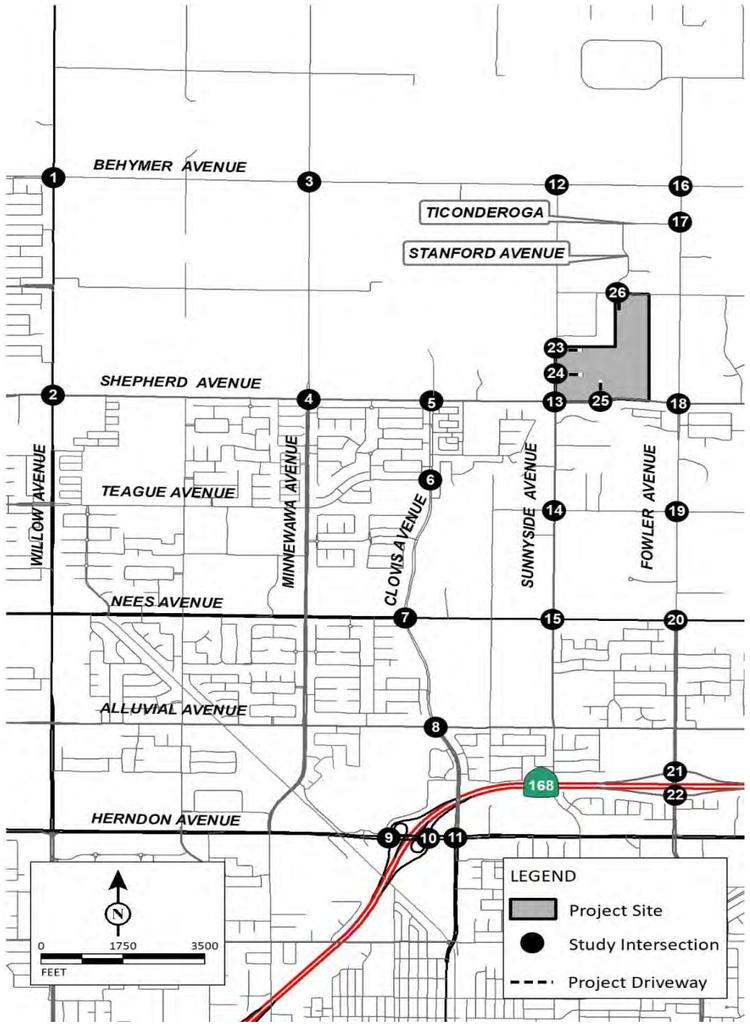
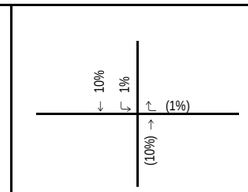
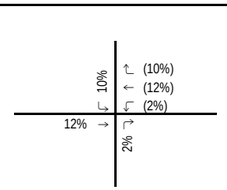




1 Willow Avenue/Behymer Avenue



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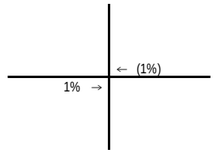
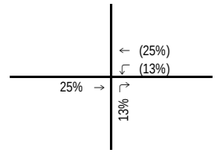
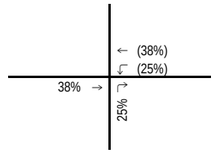


3 Minnewawa Avenue/Behymer Avenue



4 Minnewawa Avenue/Shepherd Avenue



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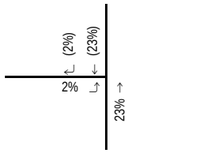
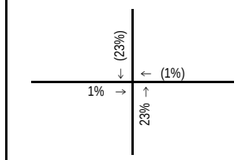
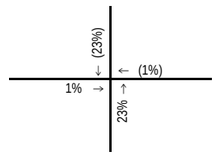


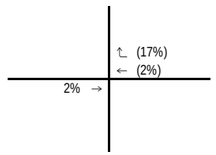
6 Clovis Avenue/Teague Avenue



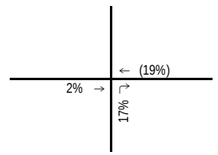
7 Clovis Avenue/Nees Avenue



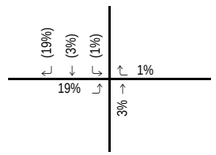
8 Clovis Avenue/Alluvial Avenue



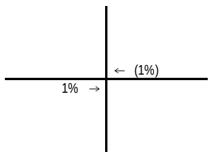
9 State Route 168 Westbound Ramps/Herndon Avenue



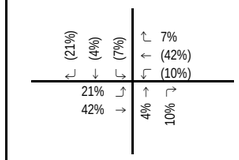
10 State Route 168 Eastbound Ramps/Herndon Avenue



11 Clovis Avenue/Herndon Avenue



12 Sunnyside Avenue/Behymer Avenue



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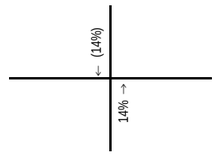
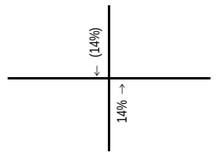
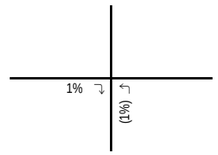


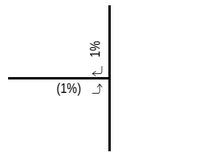
14 Sunnyside Avenue/Teague Avenue



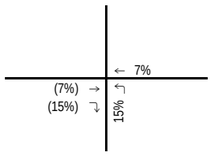
15 Sunnyside Avenue/Nees Avenue



16 Fowler Avenue/Behymer Avenue



17 Fowler Avenue/Ticonderoga



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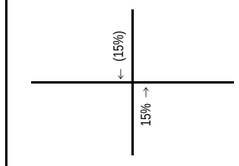
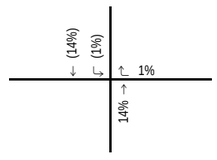
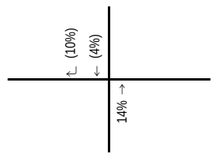


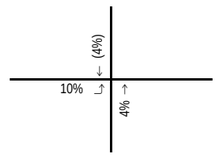
19 Fowler Avenue/Teague Avenue



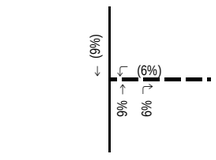
20 Fowler Avenue/Nees Avenue



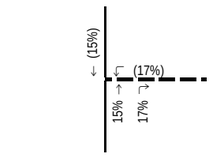
21 Fowler Avenue/State Route 168 Westbound Ramps



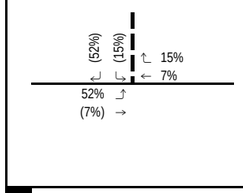
22 Fowler Avenue/State Route 168 Eastbound Ramps



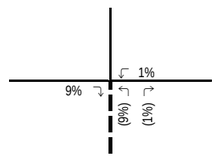
23 Sunnyside Avenue/Project Driveway 1



24 Sunnyside Avenue/Project Driveway 2



25 Project Driveway 3/Shepherd Avenue



26 Stanford Avenue-Project Driveway 4/Perrin Road

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FIGURE 3.13-5

XX% (YY%)
Inbound (Outbound) Distribution
Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Distribution

P:\DNV2201\Traffic\z45_Dist.xlsx 2/9/2023

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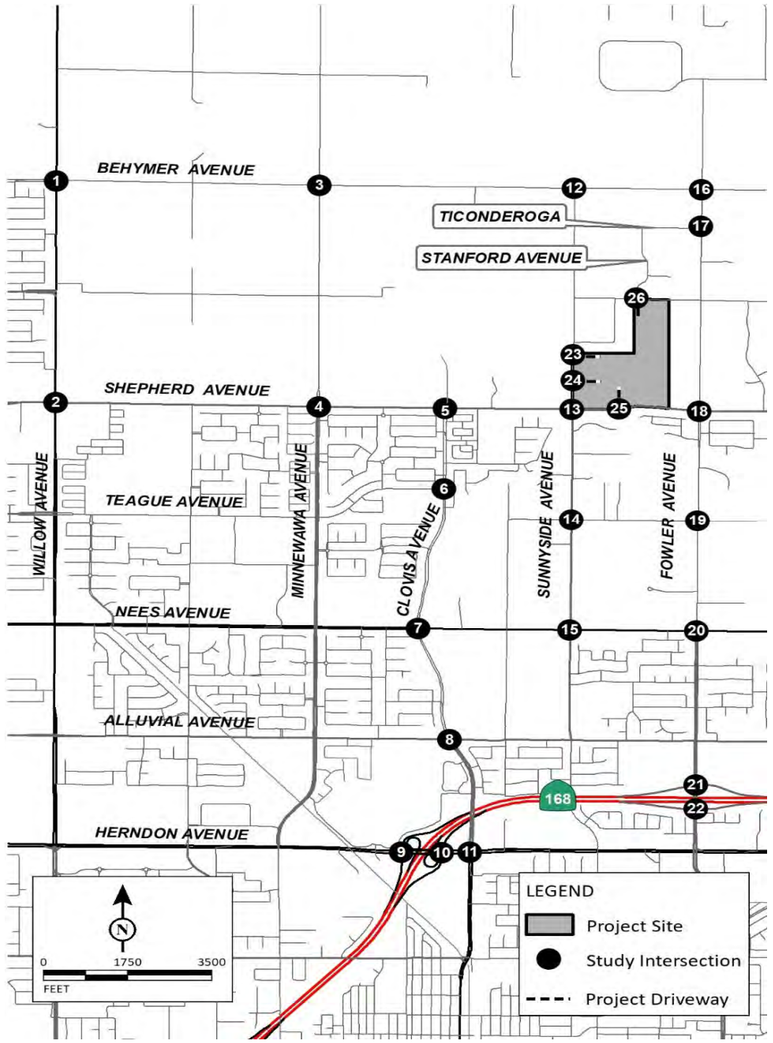
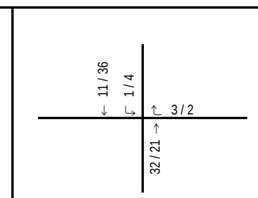
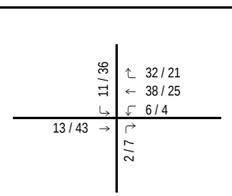




1 Willow Avenue/Behymer Avenue



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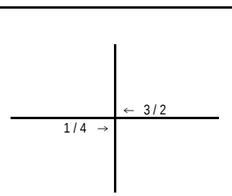
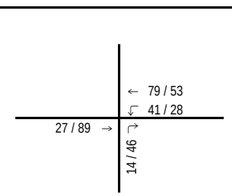


3 Minnewawa Avenue/Behymer Avenue



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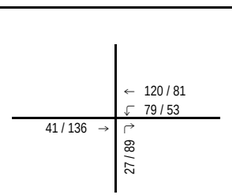
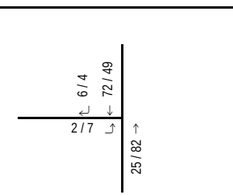
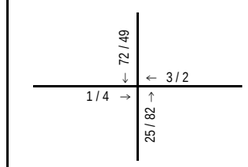


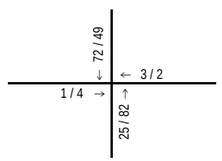
5 Clovis Avenue/Shepherd Avenue



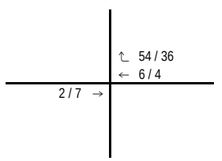
6 Clovis Avenue/Teague Avenue



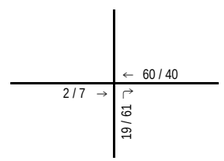
7 Clovis Avenue/Nees Avenue



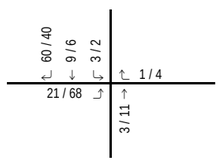
8 Clovis Avenue/Alluvial Avenue



9 State Route 168 Westbound Ramps/Herndon Avenue



10 State Route 168 Eastbound Ramps/Herndon Avenue



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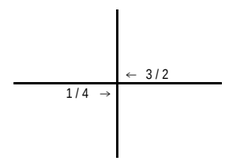
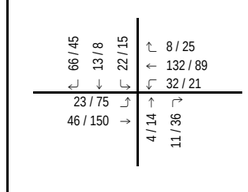


12 Sunnyside Avenue/Behymer Avenue



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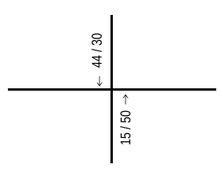
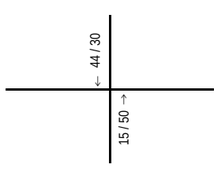
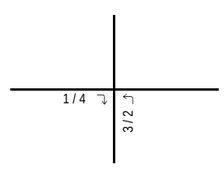


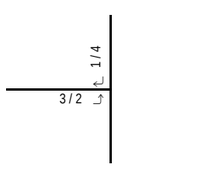
14 Sunnyside Avenue/Teague Avenue



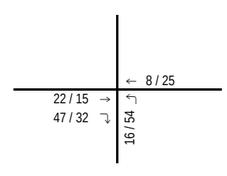
15 Sunnyside Avenue/Nees Avenue



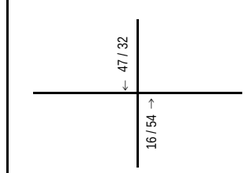
16 Fowler Avenue/Behymer Avenue



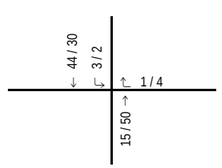
17 Fowler Avenue/Ticonderoga



18 Fowler Avenue/Shepherd Avenue

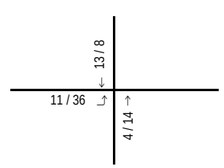


19 Fowler Avenue/Teague Avenue

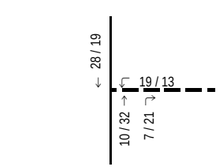


20 Fowler Avenue/Nees Avenue

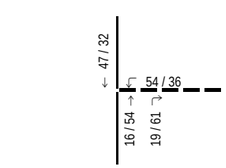
21 Fowler Avenue/State Route 168 Westbound Ramps



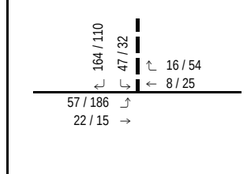
22 Fowler Avenue/State Route 168 Eastbound Ramps



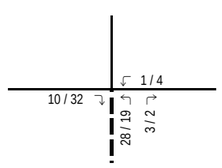
23 Sunnyside Avenue/Project Driveway 1



24 Sunnyside Avenue/Project Driveway 2



25 Project Driveway 3/Shepherd Avenue



26 Stanford Avenue-Project Driveway 4/Perrin Road

LSA

FIGURE 3.13-6

XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Assignment

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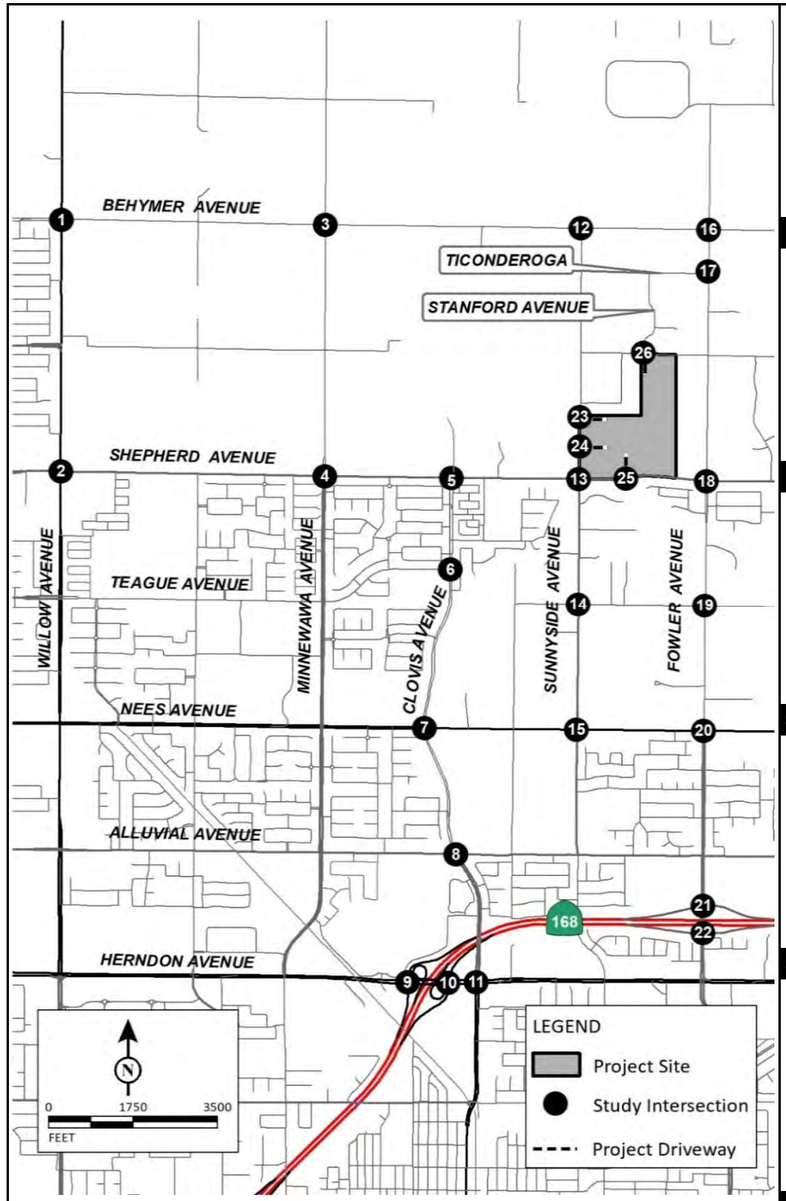

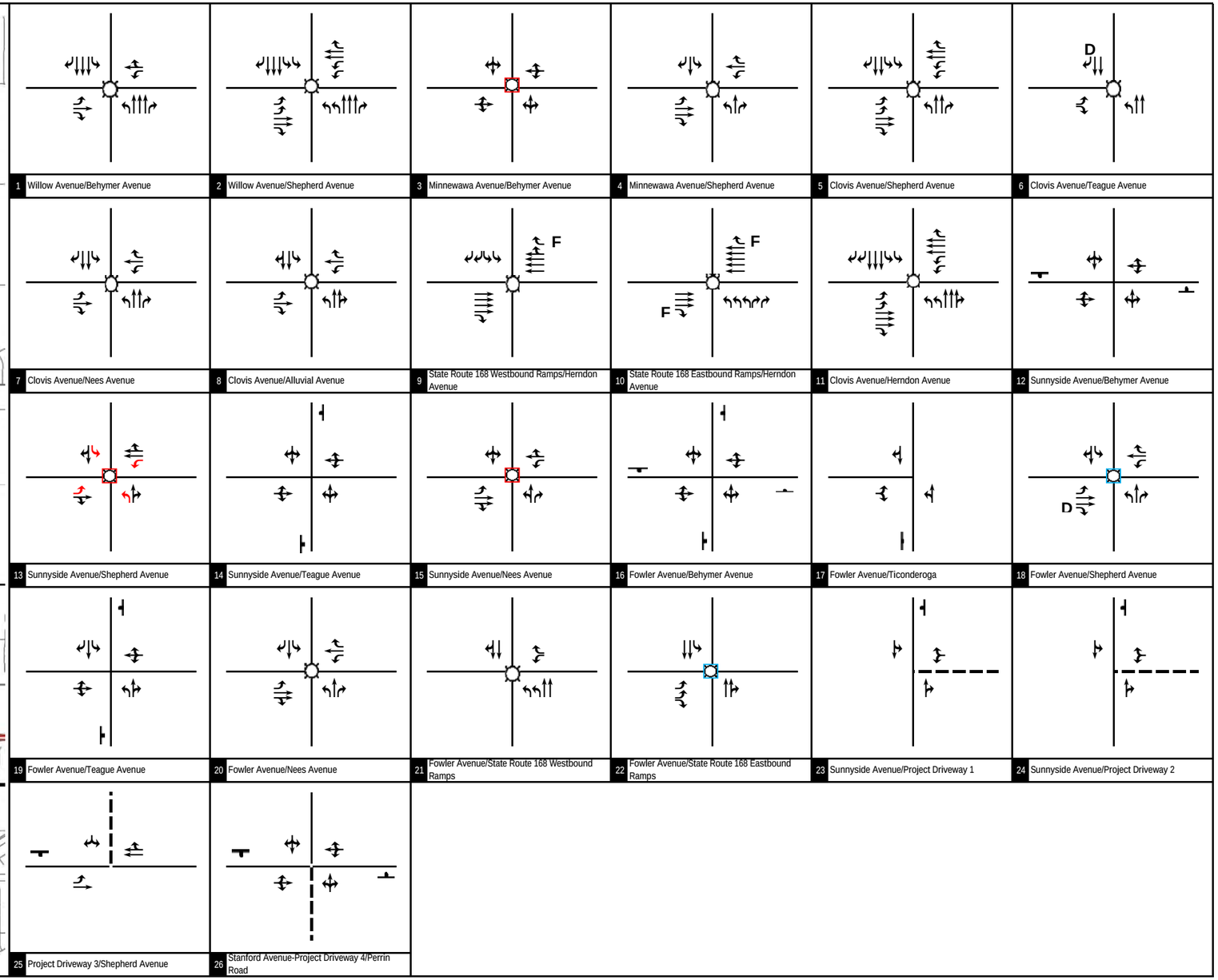

LSA

FIGURE 3.13-7

Legend

Signal
Stop Sign
D Defacto right turn
F Free right-turn
O Right-turn overlap
Y Yield
Project Driveway
Optimize Signal Timing
Install Traffic Signal
Recommended Improvements

Shepherd North Project
Transportation Impact Analysis

Existing Plus Project with Improvements Study Intersection Geometrics and Traffic Control

P:\DNV2201\Traffic\g-45_Geo_Exist WP_Impro.xlsx 2/14/2023

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This section describes the regulatory setting, impacts associated with wastewater services, water services, storm drainage, and solid waste disposal that are likely to result from Project implementation, and measures to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. Information in this section is derived primarily from:

- *City of Clovis Urban Water Management Plan 2020 Update (Provost & Pritchard, 2021B);*
- *City of Clovis Water Shortage Contingency Plan 2020 Update (Provost & Pritchard, 2021A);*
- *City of Clovis Wastewater Master Plan Update Phase 3 (Provost & Pritchard, 2017);*
- *City of Clovis Recycled Water Master Plan (Provost & Pritchard, 2017);*
- *City of Clovis Water Master Plan Update Phase III (Provost & Pritchard, 2017);*
- *2014 Master Service Plan Update (City of Clovis, 2014);*
- *Provost & Pritchard Consulting Group. 2022. Water Supply Assessment, Northwest Sphere of Influence Expansion Area;*
- *Fresno- Clovis Storm Water Quality Management Program (Fresno Metropolitan Flood Control, 2013).*

There were several comments received during the NOP scoping process related to this environmental topic. Two members of the public are concerned about water supply, reliability, and availability with regards to private groundwater wells. Both the Fresno Irrigation District and Fresno Metropolitan Flood Control District provided comments as well, addressing water usage and stormwater management, respectively. These concerns have been addressed below.

3.14.1 WASTEWATER SUPPLY

ENVIRONMENTAL SETTING

A large portion of the City of Clovis' wastewater is treated at the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), located southwest of the City of Fresno. It is approximately 16 miles by trunk sewer to the City of Clovis. Currently, the water is treated to the secondary level and then some is spread in percolation ponds and some is used directly on non-food crops. The plant can utilize extraction wells on the treatment plant property to pump water to reduce groundwater mounding under the plant. The pumped water can then be put into Dry Creek and the Houghton Canal for use by farmers downstream. FID in exchange can provide the City of Fresno approximately one AF of surface water for each two AF of water pumped and put into the canals, which is designated to be used as recharge on the east side of the District. Because Clovis contributes a percentage of the flow to the plant and pays a percentage share of maintenance, operations, and capital improvement costs, Clovis is also entitled to a proportionate share of any exchanged water and will be meeting with the City of Fresno and FID to discuss how to obtain said water. (Provost & Pritchard, 2021B).

Wastewater Collection System

The City's wastewater collection system is divided into seven major service areas. These seven major wastewater service areas also represent the City's entire water service area. Under existing conditions, the Herndon, Fowler, Sierra, and Peach service areas discharge into the City's regional

trunks, which convey flows to the RWRF. Flow from the remaining three service areas (Northwest, Northeast, and Southeast) are conveyed to the Sewer Treatment - Water Reuse Facility (ST-WRF).

According to the 2017 Wastewater Collection System Master Plan, the City currently generates an Average Daily Flow of 7.018 million gallons per day (mgd) (7,861 Acre-Feet per Year (AFY)). In 2020, approximately 5.547 mgd (6,213 AFY) was conveyed to the RWRF, while 2.229 mgd (2,496 AFY) was treated at the ST-WRF; a total average daily flow of 7.775 mgd (8,710 AFY). (Provost & Pritchard, 2021B).

The City is exploring ways to recover the treated effluent either directly through a recycled water pipeline project or indirectly through exchanges.

Wastewater Treatment

Through a Joint Powers Agreement with the City of Fresno, the City of Clovis conveys much of its wastewater to the RWRF and is entitled to a maximum capacity of 9.3 mgd. The RWRF is operated by the City of Fresno and currently has a maximum capacity of 80 mgd. If required, the City has the capability to acquire additional capacity at the RWRF. (Provost & Pritchard, 2021B).

The City constructed a ST-WRF, which began service in 2009. The ST-WRF produces a disinfected tertiary treated water supply. The plant serves the new growth areas of the City in the Southeast, Northwest, and ultimately the Northeast Urban Centers. The ST-WRF is located on Ashlan Avenue, approximately 600 feet west of McCall Avenue. The facility was designed to treat an average daily flow of 2.8 million gallons per day (3,136 AFY) of wastewater. The plant is designed to accommodate future expansion and will ultimately treat 8.4 million gallons per day (9,400 AFY). In 2020, approximately 2,496 Acre-feet (AF) of wastewater was treated at the ST-WRF and 6,213 AF was treated at the RWRF. Of the 2,496 AF treated at the ST-WRF, 710 AF was used within the service area, while the remainder was discharged. (Provost & Pritchard, 2021B).

RECYCLED WATER

Currently, recycled water is used for irrigation of mostly public and some private landscape within the service area. 574 AF of recycled water was used in 2020 to irrigate landscape, while 136 AF was used for agricultural irrigation. Current areas receiving recycled water include Freeway 168 between Shepherd Avenue and Sierra Avenue, Clovis Community Medical Center, and multiple City parks and landscape areas.

Landscape irrigation will continue to be the main use of recycled water in the future for the City. All public landscape areas within three-quarters of a mile of the distribution system are considered potential recycled water use areas. Clovis Unified School District is evaluating the use of recycled water for its landscape areas. Caltrans has expanded their use of recycled water along Freeway 168 from Armstrong Avenue west to Sierra Avenue. This increase in volume and expansion of uses is expected to increase due to proactive actions taken by the City, which are described in a subsequent section. The City is very interested in exploring the use of recycled water for groundwater recharge. The water could be provided to recharge facilities during periods when no raw water supplies are available or to supplement raw water supplies.

Recycled water produced by the tertiary treatment plant is used for agricultural purposes when excess water is available. The City currently has a farmer adjacent to the ST-WRF that uses surplus recycled water to irrigate agricultural crops. The crops to be irrigated include almonds, citrus, and alfalfa. Farmers in the International Water District area are also interested in utilizing the water to irrigate crops which mainly are citrus. Currently, this area is not in the City's service area. Excess recycled water supplies are currently discharged to Fancher Creek and conveyed through irrigation canals to agricultural lands southwest of Clovis, or to the Little Dry Creek Diversion channel.

There are currently no wildlife habitat areas or wetlands within the Clovis service area. Potentially, the water discharged to FID could be used for wetlands or wildlife habitat enhancement areas.

The water could also potentially be used by future industrial customers within the new growth areas of the City; however, it will depend on their needs and their proximity to the recycled water transmission and distribution lines. At this point none have been specifically identified.

REGULATORY SETTING

Clean Water Act (CWA) / National Pollutant Discharge Elimination System (NPDES) Permits

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program, which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, stormwater associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of five key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), (3) pH acid/base balance, (4) Ammonia, and (5) Nitrate. These levels can be achieved by well-operated sewage plants employing "secondary" treatment with denitrification. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge." Denitrification uses the activated sludge process to remove nitrogen from the wastewater.

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

The City's current Waste Discharge Requirements and Master Recycling Permit, which regulates the wastewater effluent quantity and quality upon discharge, was issued by the Central Valley Regional Water Quality Control Board and is Order R5-2019-0021 NPDES No. CA0085235.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (SWRCB) has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley Regional Water Quality Control Board (CVRWQCB) NPDES permit system, all existing and future municipal and industrial discharges to surface water within the City would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

City of Clovis General Plan

Policies: Land Use Element

- Policy 3.5 Fiscal sustainability. The City shall require establishment of community facility districts, lighting and landscaping maintenance districts, special districts, and other special funding or financing tools in conjunction with or as a condition of development, building or permit approval, or annexation or sphere of influence amendments when necessary to ensure that new development is fiscally neutral or beneficial.

Policies: Public Facilities & Services Element

- Policy 1.1 New development. New development shall pay its fair share of public facility and infrastructure improvements.
- Policy 1.3 Annexation. Prior to annexation, the city must find that adequate water supply and service and wastewater treatment and disposal capacity can be provided for the proposed annexation. Existing water supplies must remain with the land and be transferred to the City upon annexation approval.
- Policy 1.4 Development-funded facilities. The City may require developments to install onsite or offsite facilities that are in excess of a development's fair share. However, the City shall establish a funding mechanism for future development to reimburse the original

development for the amount in excess of the fair share costs.

- Policy 1.6 Master plans. Periodically update water, recycled water, wastewater, and stormwater master plans and require all new development to be consistent with the current master plans.
- Policy 1.8 Water facility protection. Protect existing and future water, wastewater, and recycled water facilities from encroachment by incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.

Policies: Environmental Safety Element

- Policy 1.3 Geologic and seismic risk. Prohibit development on unstable terrain, excessively steep slopes, and other areas deemed hazardous due to geologic and seismic hazards unless acceptable mitigation measures are implemented. Require that underground utilities be designed to withstand seismic forces and accommodate ground settlement.

City of Clovis Municipal Code

Municipal Code Chapter 3.10 Development Impact Fees, The purpose of this chapter is to establish a uniform set of procedures applicable to AB 1600 development impact fees that are adopted pursuant to the authority set forth in Government Code Section 66000 et seq. and the Municipal Code. These procedures are intended to apply to all AB 1600 development impact fees adopted by the City regardless of whether there is an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee. If there is a conflict between this chapter and an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee, the provisions of this chapter shall control.

Municipal Code Chapter 6.4 pertains to Sewage Disposal regulations. This chapter establishes the sewer connections and permits required to safely create a functioning sewer system both in tandem with the City system, and outside the City. This Chapter also establishes sewer service charges and fees. Chapter 6.8, Recycled Water Use, provides for and encourages the use of recycled water in a manner that ensures the health, safety, and general welfare of the residents pursuant to and consistent with all applicable laws including, but not limited to, the California Code of Regulations Title 17 and 22.

The City Municipal Code also contains Chapter 8.6, Plumbing Code. This Chapter adopts the California Plumbing Code and includes specific amendments.

Clovis Wastewater Master Plan (2017)

The Clovis Wastewater Master Plan Update, Phase 3 was adopted in 2017. The Wastewater Master Plan Update process consisted generally of developing design criteria, defining wastewater service areas, developing wastewater flow projections, analyzing and designing collection system pipelines, and summarizing results. The Wastewater Master Plan Update, Phase 3, (2017 Master Plan) is the latest phase of an effort begun in 1995 to update the City's Wastewater Master Plan. The preceding phase, referred to as the Wastewater Master Plan Update, Phase 2, (2008 Master Plan) was documented in a final report dated June 30, 2008. Under the 2017 Master Plan, the core of the City

is planned to discharge to regional trunk sewers and on to the Fresno-Clovis RWRF in southwest Fresno.

Clovis Recycled Water Master Plan (2017)

The City of Clovis released a Recycled Water Master Plan in 2017. This Plan demonstrates how the water systems in the City will accommodate future population growth. Due to the impact of a five-year drought throughout the State, the scarcity of water supplies has resulted in significant motivation to continue investment in the use of recycled water to meet water demands. The purpose of the Clovis Recycled Water Master Plan Update is to evaluate current recycled water use, identify additional market opportunities as defined in the adopted General Plan and produce an implementation plan incorporating recycled water as a significant portion of the Clovis' water supply. The efficient use of surface water and groundwater resources is critical to maintaining sustainability of communities throughout the Central Valley. To help alleviate potable water demands placed on these supplies, recycled water is a key source of supply many communities, including Clovis, utilize to enhance management of local water resources.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

- Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: The proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments (Less than Significant)

WASTE DISCHARGE REQUIREMENTS (WDRS) BOARD ORDER NUMBER NO. 5-2019-0021 (NPDES PERMIT NO. CA0085235).

A large portion of the City of Clovis' wastewater is treated at the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), located southwest of the City of Fresno. Through a Joint Powers Agreement with the City of Fresno, the City of Clovis conveys much of its wastewater to the RWRF and is entitled to a maximum capacity of 9.3 mgd. The RWRF is operated by the City of Fresno and currently has a maximum capacity of 80 mgd.

The ST-WRF serves the new growth areas of the City in the Southeast, Northwest, and ultimately the Northeast Urban Centers. With a total average daily flow of 2.8 million gallons per day (3,136 AFY), the plant is designed to accommodate future expansion and will ultimately treat 8.4 million gallons per day (9,400 AFY). The Project site would be served by a new wastewater collection system installed within proposed public utilities easements that would ultimately be conveyed to the ST-WRF.

The proposed Project would increase the amount of wastewater requiring treatment. According to the City's 2017 Wastewater Master Plan Update, single family residential uses are estimated to generate 55 gallons per capita per day or 175 gallons per day per equivalent dwelling unit (edu). The Project site includes up to 605 single family residential units. Using this rate, the proposed Project would generate approximately 105,875 gallons per day of wastewater. Occupancy of the proposed Project would be prohibited without sewer allocation. An issuance of sewer allocation from the City's available capacity would ensure that there would be a final determination by the wastewater treatment and/or collection provider that there is adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. Additionally, any planned expansion to the RWTF with a subsequent allocation of capacity to the proposed Project would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

The ST-WRF is currently in compliance with the WDR requirements of Order Number No. 5-2019-0021 (NPDES Permit No. CA0085235). The projected flows of the proposed Project are not expected to exceed the treatment capacity available for treatment. Full buildout of the proposed Project would slightly increase the existing treatment demand at the ST-WRF. As described above, the City must also periodically review and update their Utility Master Plans, including the Wastewater Master Plan, and as growth continues to occur within the City, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development. These pre-existing proactive efforts ensure the City would be able to reliably treat the wastewater as the community expands its population up to and through the next plant expansion, including with implementation of the proposed Project.

The City General Plan designates the Development Area as Rural Residential and therefore anticipated potential development. Given that projected wastewater generation volumes associated with the buildout of the Development Area would not exceed the projected wastewater generation volumes described in the Wastewater Master Plan and the Urban Water Management Plan, this impact would be **less than significant**, and no mitigation is required.

Impact 3.14-2: The proposed Project would not require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant)

As Clovis continues to develop in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. These needs have been

addressed in the Clovis Wastewater Master Plans and will require that the City continue to implement improvements to some pump stations, and sewer mains when triggered by growth.

The overall collection sewer strategy for the City of Clovis, including the proposed Project, consists of a combination gravity sewer collection system with pump or lift stations located along the collection system to convey wastewater to influent the ST-WRF.

The Project site would be served by a new wastewater collection and conveyance system installed within proposed public utilities easements. The proposed wastewater conveyance facilities would connect to the existing sewer mains as part of the City of Clovis collection and treatment system. Wastewater treatment would be provided at the ST-WRF, although in the interim it may receive treatment at the existing Fresno-Clovis Regional Wastewater Treatment Plant in the City of Fresno.

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvement plans which undergo review by the City of Clovis Engineering Department to ensure consistency with the City of Clovis standards and specifications. This improvement plan process will include full engineering design (i.e., location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Clovis standards and specifications.

CONCLUSION

The construction of the new wastewater facilities, which are associated with future buildout of the proposed Project, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the wastewater system, and all construction activities within the Development Area of the Project site, are addressed throughout this EIR. There are no other anticipated impacts associated with the infrastructure construction activities beyond what is already discussed throughout this EIR.

The installation of the wastewater collection and conveyance system infrastructure to serve the proposed Project would have a less than significant impact relative to this topic. The wastewater treatment plant would not require upgrades or improvements in order to serve the proposed Project. Development of the proposed Project would have a **less than significant** impact relative to this topic.

3.14.2 WATER SUPPLIES

The following information is based on the *City of Clovis Urban Water Management Plan 2020 Update (Provost & Richard, 2021B); City of Clovis Water Shortage Contingency Plan 2020 Update (Provost & Pritchard, 2021A);* and the *City of Clovis Water Master Plan Update Phase III (Provost & Pritchard, 2017),* which is included as Appendix J of this Draft EIR.

ENVIRONMENTAL SETTING

The City of Clovis water service area largely aligns with the City's annexed boundaries. According to the *City of Clovis Urban Water Management Plan 2020 Update* (UWMP), the City's water system provides water supplies to approximately 122,350 people throughout the City of Clovis and the county island of Tarpey Village. The overall system demands have been increasing in the past five years due to population growth. However, the water use per person saw a sharp decline in 2015 in response to mandatory drought restrictions, followed by a slight increase as the 2012-2016 drought ended. Usage has remained well below pre-drought levels since 2016. (Provost & Pritchard, 2021B).

The City has three main water supply sources: groundwater, surface water, and recycled water. As the City continues to grow, it intends to expand its surface water supply use, recycled water use, and to continue intentional groundwater recharge efforts to relieve pressure on the groundwater aquifer. (Provost & Pritchard, 2021B).

The City's Public Utilities Department is responsible for water service within the City (Provost & Pritchard, 2021B). The City's water supply operates via a network of water mains and wells, and maintains treatment and/or disinfection facilities on all City wells thus ensuring high quality drinking water that meets all state and federal standards. The Public Utilities Department operates and maintains the City's Surface Water Treatment Plant and manages all surface water supplies including the acquisition of new supplies for developing areas of the City. This Public Utilities Department also conducts groundwater recharge programs, the water conservation program, rate analyses, and master planning.

The City has 37 water wells to provide for the needs of its residents. Some of these have wellhead treatment facilities to treat contaminated water. The wells discharge water into a distribution main grid, based on a minimum of 12-inch mains, spaced at half-mile intervals.

The City began operations of the Surface Water Treatment Plant (SWTP), located on the Enterprise Canal on the east side of Clovis, in 2004. Kings River water is supplied to the plant via Fresno Irrigation District's (FID) Enterprise Canal. This 22.5 million-gallons-per-day plant allows Clovis to serve existing users and new growth areas, while lessening the demand on groundwater.

City of Clovis Water Service Area

The City is located in the northeast quadrant of the Fresno-Clovis Metropolitan Area and is situated in the midst of the agriculturally rich San Joaquin Valley. The City limits currently encompass 25.9 square miles. The City's Sphere of Influence (SOI) covers 34.9 square miles, while the City's General Plan encompasses approximately 74.3 square miles. (Provost & Pritchard, 2021B).

According to the UWMP, the City's Public Utilities Department is the only municipal water purveyor in the City and provides service to approximately 122,350 City-customers. The City's service area encompasses the City limits and the small unincorporated community of Tarpey Village. The City's 2020 population was 118,741 while Tarpey Village has an estimated population of 3,609 and is mainly comprised of residential housing. (Provost & Pritchard, 2021B).

Within the City's General Plan Area but outside of the SOI are three county service areas (CSA) and one waterworks district (WWD) that provide water service. Currently, the three CSAs and WWD are considered independent of the City's utilities and service system. (Provost & Pritchard, 2021B).

Current and Projected Population

According to data collected from the California Department of Finance (DOF), the City's population for the year 2020 was approximately 118,741, while the American Community Survey, 5-year estimates (2015-2019) reported that Tarpey Village had a population of 3,609. This corresponds to a service area population of 122,350. The Tarpey Village area is considered built-out; therefore, the population is assumed to remain constant. The City's population increase over the last ten years has averaged 2.2 percent annually, from 100,895 in 2011 to 118,741 in 2020. It is generally accepted by the City the population growth will slow, meeting the 2040 projection of 174,500 (for Clovis only), yielding a growth rate of 1.9 percent annually. (Provost & Pritchard, 2021B).

Within the City's service area, the documented population is served water supply through the City's water system and, as the City develops, it is currently anticipated the projected population will be served by the City's water system; therefore, all population projections are utilized in water system demand projections. (Provost & Pritchard, 2021B).

TABLE 3.14-1: EXISTING AND PROJECTED POPULATION

	2020	*2025*	*2030*	*2035*	*2040*
Total Water Demand	122,350	135,015	148,045	162,367	178,109

SOURCE: PROVOST & PRITCHARD, 2021B

Climate

The climate in the City can be classified as a Mediterranean-type climate. Summers are hot and dry, and winters are cool with an average precipitation of about 10.72 inches per year. The area is subject to significant variations in annual precipitation. Most of the annual precipitation occurs during the period from November through April. (Provost & Pritchard, 2021B).

The mean annual precipitation is approximately 10 inches. The City experiences hot summer temperatures with many days in the 90°F range from June to September. The average annual temperature is 64.6 degrees Fahrenheit (°F), although it is not unusual for summer readings to reach well over 100°F. Nighttime temperatures from June to September hover around mid-sixties. The winter temperatures are much colder, with nighttime highs in the forties. Spring and fall provide moderate temperature ranges. A greater quantity of water is evaporated during May through August in correlation to high temperatures and low humidity, which results in high water demand for landscape irrigation. (Provost & Pritchard, 2021B).

City of Clovis Water Demands

At the General Plan planning horizon in 2035, total demand within the sphere of influence (SOI) is projected to be over 46,000 acre-feet per year (AFY). Total supply is expected to be 65,034 AFY. Development to the limits of the SOI is expected to continue the present course of development of surface supplies. The level of reliance on groundwater is planned to stay the same and additional supplies are planned to be served by an expansion of 22.5 MGD at the current SWTP and construction of a second SWTP with capacity of approximately 20 MGD. If there are opportunities for expanded intentional recharge, they are expected to be pursued. (ICF, 2018).

The City UWMP buildout is projected for the year 2083, at which time the population of Clovis is estimated to be 280,000. The average demand for City water at buildout will be approximately 65,400 AFY based on land use demand factors. Surface water requirements are anticipated to increase significantly by 2083. Much of the planned development outside the SOI is in an area with limited groundwater resources and will require the acquisition of surface water supplies. Since this area is outside organized irrigation and water district agencies, it will also be important for the City to contract for surface supplies long before they are needed. Expansion of the surface water treatment facilities is estimated to total approximately 45 MGD. Projected growth will more than double the peak need for water deliveries. The City plans to add new supplies in accordance with increased demands. The City's existing system has sufficient supplies to meet the demands of planned development within the City's current SOI boundary to 2035.

City potable and non-potable water demand in 2020 was approximately 30,144 AF. Table 3.14-1 represents the total sum of projected water demands for potable and raw use within the service area. These demands represent the City's total water demand in the future (recycle water is included). The 2020 data reflects actual 2020 water usage. Table 3.14-2 is completed for 'normal' years when no drought conditions are present and water supplies are available in their expected quantities. (Provost & Pritchard, 2021A).

TABLE 3.14-2: EXISTING AND PROJECTED TOTAL WATER DEMAND IN NORMAL YEARS, AFY

	2020	*2025*	*2030*	*2035*	*2040*
Total Water Demand	30,854	39,737	42,824	46,422	52,598

SOURCE: PROVOST & PRITCHARD 2021B; TABLE 4.6

DRY YEAR WATER DEMAND

The City currently has a water conservation program in place, as described in the City 2020 Water Shortage Contingency Plan (WSCP). The City has six triggering levels which correspond to water shortage levels. The water shortage levels are defined based on the percent reduction in available water supply when compared to a typical year. Each water shortage level has an accompanying goal for water consumption reduction varying from 10 percent to more than 50 percent. The water shortage levels, and their respective anticipated reduction in potable water demand, are shown in 3.14-3.

TABLE 3.14-3: WATER SHORTAGE CONTINGENCY PLAN PROJECTED DEMAND REDUCTION

LEVEL	*PERCENT SUPPLY REDUCTION*
I	Up to 10 percent
II	Up to 20 percent
III	Up to 30 percent
IV	Up to 40 percent
V	Up to 50 percent
VI	Over 50 percent

SOURCE: PROVOST & PRITCHARD, 2021A, TABLE 4-1

As discussed in the City's 2020 UWMP (Provost & Pritchard, 2021B), the reliability of the water system is reasonably robust; however, in a multiple dry year condition, the City will need to enact the WSCP to reduce demands. Table 3.14-4 displays the normal, single-dry, and multiple dry year demand comparisons. All years of the multiple dry year scenario utilize WSCP levels of conservation efforts. (Provost & Pritchard, 2021A).

TABLE 3.14-4: PROJECTED FUTURE DRY YEAR POTABLE AND RAW WATER DEMAND

HYDROLOGIC CONDITION	*2025*	*2030*	*2035*	*2040*
Normal Dry Year, AFY	39,737	42,824	46,422	52,598
Single Dry Year, AFY	34,272	37,359	40,957	47,133
Multiple Dry Year 1	36,489	39,422	42,840	48,707
Multiple Dry Year 2	34,183	36,962	40,200	45,758
Multiple Dry Year 3	31,346	33,969	37,028	42,277
Multiple Dry Year 4	28,005	30,474	33,353	38,293
Multiple Dry Year 5	37,825	40,758	44,176	50,043

SOURCE: PROVOST & PRITCHARD, 2021B; TABLES 7-3 AND 7-4

WATER SUPPLIES

Surface Water Supply

The City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River. The Central Valley Project is a planned supply for the future. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B).

FID's average gross annual entitlement is 452,541 AF. Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015. The City's allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving

water. Over time, the City has received on average 17,011 AFY, though this has varied from 9,452 AF in the severe drought of 2015 to over 24,958 AF in 2017. (Provost & Pritchard, 2021B).

Two additional water districts are located within the City's General Plan Boundaries: Garfield Water District (GWD) and International Water District (IWD). Both have access to Class I CVP surface water supplies. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out it is estimated that the entire 1,200 AFY supply will be added to the City's Supply. As the districts urbanize, supplies associated with these areas are expected to be added to the City's supply. The City uses their surface water supplies in two primary ways: (1) as potable water supply after being treated at the City's Surface Water Treatment Plant (SWTP) or (2) as groundwater recharge in various basins located in and around the City's service area. (Provost & Pritchard, 2021B).

Groundwater Supply

The City's groundwater supplies stem from the basin underlying the area, the Kings Subbasin; the Subbasin holds a status of being critically over drafted. The Kings Subbasin, a non-adjudicated basin, is a high-priority basin which lies within the Tulare Lake Hydrologic Basin. This Basin contains multiple interconnected subbasins that transmit, filter, and store water. These subbasins are Kaweah and Tulare Lake to the south, Westside and Delta Mendota to the west, and Madera to the North. (Provost & Pritchard, 2021B).

The Kings Subbasin (Subbasin 5-22.08) covers a surface area of approximately 976,000 acres (1,530 square miles). The Department of Water Resources estimated that the total basin storage was about 93,000,000 AF to a depth of more than 1,000 feet. The two major rivers overlying the subbasin are the San Joaquin River and Kings River. The Fresno Slough and James Bypass are along the western edge of the southern basin and connect the Kings River to the San Joaquin River. (Provost & Pritchard, 2021B).

The subbasin does have localized water quality impairments, including Dibromochloropropane (DBCP); Nitrate; Ethylene-Dibromide; 1,2,3-Trichloropropane (TCP); Methyl Tert-butyl Ether (MTBE); uranium; arsenic; hexavalent chromium; perfluoroalkyl substances (PFAS) and petroleum hydrocarbons. High concentrations of fluoride, boron, and sodium can be found in localized areas of the subbasin. (Provost & Pritchard, 2021B).

In 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law to provide a framework for management of groundwater supplies by local agencies and restricts state intervention, if required. SGMA provides an opportunity for local agencies overlying the basin to form a Groundwater Sustainability Agency (GSA), which is the primary agency responsible for achieving sustainability. As part of the region's compliance with SGMA, the North Kings Groundwater Sustainability Agency (NKGSA) was formed and includes representatives from Bakman Water Company, Biola Community Services District, City of Fresno, City of Clovis, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield

Water District, and International Water District. The North Kings Groundwater Sustainability Agency adopted a Groundwater Sustainability Plan (GSP) in late 2019.

NORTH KINGS GROUNDWATER SUSTAINABILITY AGENCY

The City is a member of the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA is working collaboratively, under a coordination agreement with the other six (6) Groundwater Sustainability Agencies in the Kings Subbasin to achieve sustainable groundwater conditions by 2040 in accordance with the Sustainable Groundwater Management Act of 2014 (SGMA) for critically over drafted groundwater basins such as the Kings Subbasin. (Provost & Pritchard, 2021B).

SGMA identifies six (6) sustainability indicators to be monitored and reported in order to document sustainability: lowering groundwater levels, reduced [groundwater] storage, seawater intrusion, degraded [groundwater] quality, land subsidence, and surface water depletion. The NKGSA documents five (5) of those with seawater intrusion not being applicable to this region. (Provost & Pritchard, 2021B).

The City will continue increasing its surface water and recycled water supply usage to a point where the groundwater extraction is not greater than the sustainable yield in a normal year. The sustainable yield is currently estimated at 9,400 AF per year (AFY) for the SOI). (Provost & Pritchard, 2021B).

Potable water production consists of municipal groundwater wells and a Surface Water Treatment Plant (SWTP). The total groundwater pumping that occurs within the City boundaries include City-owned municipal wells and City-owned park irrigation wells. It is noted that there are other wells within the boundaries of the City of Clovis including CUSD irrigation wells and rural residential domestic wells. The following section provides a summary of the estimated groundwater pumping that occurs within the current City limits and planning area.

City-Produced Groundwater

The City's system contains more than 37 active permitted wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B).

Wells are spaced at intervals across the City and are connected to a distribution system. The pipes are sized for local distribution and have, in certain instances, presented some restrictions to cross-town water supply distribution. The transmission network consists primarily of 12-inch mains on a one-half mile grid with extensive looping. The wells are controlled by a telemetry system that controls pump operation as well as independent controls in case of remote computer failure. The production rate of the existing wells varies from approximately 300 gallons per minute (gpm) to approximately 2,200 gpm. (Provost & Pritchard, 2017).

HISTORICAL GROUNDWATER PUMPING

The water system was initially constructed near the turn of the 20th century, when the first municipal well was installed, and up until July 2004, the City's sole source of drinking water was groundwater. The City currently obtains groundwater from 37 active permitted wells and one standby well, which have a total capacity of approximately 37,690 gallons per minute (gpm). There are also six planned wells, adding an additional planned capacity of 4,750 gpm, bringing the total well capacity to 42,440 gpm. In 2023, seven of the existing active wells (Wells 10, 18, 31, 32, 36, 40, and T-5) are offline due to Nitrate, Iron, Manganese, TCP, or PFAS water quality concerns, and one well (Well 20) is listed as standby due to iron and manganese concerns. TCP, PFAS, DBCP and high iron (Fe) and manganese (Mn) are the main water quality constraints in the Clovis area. Four (4) more of the City's wells are currently on inactive status due to being dry or producing too much sand (Wells 3, 11, T-1, and T-3). (Provost & Pritchard, 2021B).

In 2020, groundwater provided approximately 49 percent of the total potable water use. The historical volume of groundwater pumped by the City over the past five years is provided in Table 3.14-5. The groundwater extraction has reduced since 2016 and is expected to continue to be reduced, as discussed later in this section. (Provost & Pritchard, 2021B).

In 2020, recharge was 5,316 AF, while the City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. In the past 30 years the groundwater table has dropped 48 feet, from a depth of 92 feet in 1991 to a depth of 140 feet in 2019. Recharge efforts began in 1974, and in 2004 the City began utilizing surface water with the goal of reducing groundwater extraction. Recharge efforts by the City have not been enough to stem the decline as the basin is shared with other users who either don't recharge or inadequately recharge. (Provost & Pritchard, 2021B).

Groundwater pumping by City wells (potable and irrigation) from 2016 to 2020 is summarized in Table 3.14-5.

TABLE 3.14-5: HISTORICAL GROUNDWATER PRODUCTION

	2016	*2017*	*2018*	*2019*	*2020*
Groundwater Supply, AFY	13,187	12,001	11,991	10,956	12,105

SOURCE: PROVOST & PRITCHARD, 2021B; TABLE 6-2

Recycled Water

The City's ST-WRF produces tertiary treated effluent that can be used for a variety of applications but is primarily used either as agriculture or landscape irrigation, with the remaining being discharged to nearby creeks. The City intends to continue to expand the beneficial users of the recycled water supply and show the volumes in the water supply portfolio. Use of recycled water in this manner will continue to offset the City's use of potable sources for non-potable demands, such as irrigation. (Provost & Pritchard, 2021B).

Currently, the City provides recycled water for landscape and agricultural irrigation at 66 metered sites (through 129 metered services). There is a goal of expanding the users to include schools within

the Clovis Unified School District in the future as discussed in the City's Recycled Water Master Plan (RWMP) (Provost & Pritchard, 2021B).

A total of 574 AF of recycled water was used in 2020 to irrigate landscape, while 136 AF was used for agricultural irrigation. Current areas receiving recycled water include Freeway 168 between Shepherd Avenue and Sierra Avenue, Clovis Community Medical Center, and multiple City parks and landscape areas. (Provost & Pritchard, 2021B).

Potable Water Supply Availability and Reliability

The City's surface water and groundwater supply reliability as described in the City's 2020 UWMP is summarized below.

SURFACE WATER RELIABILITY

Surface water is supplied from the Kings River and conveyed to the City by the FID. The Kings River is impacted by the level of snowmelt and precipitation received in the area and is susceptible to dry conditions. The City's contract with FID ensures that the City receives a percentage of the total FID entitlement, approximately 2.1 AF per acre within the FID boundary; the City's area is capped at 7.12 percent of the FID boundary or approximately 32,100 AFY in a normal water year. Additionally, the City has recently executed an additional contract with FID for development of a new, firm water supply starting at 1,000 AFY in 2020 and increasing to a maximum of 7,000 AFY by 2045 and thereafter; this new supply will not have the variability of the existing supply based on water year. Historically, FID's entitlement on the Kings River has been considered reliable although it was affected significantly by the recent drought.

The most probable water supply in the City's portfolio to be impacted by climate change is the surface water supply. The NKGSP examined the reliability of the Kings River supply and concluded that the agencies reliant on the Kings Subbasin could continue to plan on those supplies with climate change factored in, stating specifically, "Kings River water supplies available to the Kings Subbasin will be managed in the future to maintain historical levels of water supplies." Evaluation of the Kings River supplies into the future, considering climate change impacts of warmer temperatures, showed more precipitation occurring as rainfall and less as snowfall and that the snowfall (snowpack) will have a tendency to melt sooner in the season. The biggest impact this shift will have is on water management, including additional reservoir storage and increased recharge during low-use periods. The GSP further states that "climate change will have no significant impact on Kings River diversions." (Provost & Pritchard, 2021B).

The supply is greater than the demand for each year and reflects the projected surplus during a normal water year. During a single-dry year, surface water allotments are anticipated to be reduced by as much as 66 percent for Kings River surface water supplies, and CVP Class II supplies are eliminated completely in dry years. In the future, as the City becomes more reliant on surface water supplies, the impact of surface water reductions in dry years will be more significant. Demand reductions due to water shortage measures are included in the demand estimates. During a single-dry year demands will be reduced by temporarily eliminating groundwater recharge activities and implementing the water shortage contingency plan as necessary. (Provost & Pritchard, 2021B).

To provide protection for the system, planning for a 20 percent supply excess over demands is a guiding principle. Therefore, while during the first-year adequate supplies are available for normal demands and no demand reductions are required, voluntary conservation will be promoted, and recharge activities may be curtailed to maintain an adequate supply buffer for the system. During the subsequent second, third, and fourth years, the Water Shortage Contingency Plan will be implemented with varying levels of mandatory conservation required for all users. In addition, the City may choose to reduce groundwater recharge activities and will be utilizing banked groundwater to augment the City's supply. As with the 2012-2016 drought period, it is anticipated the final year will begin to see an improvement in supply availability and some restrictions may be relaxed; however, if that is not the case, the City may need to continue mandatory conservation strategies. (Provost & Pritchard, 2021B).

The water obtained from the Central Valley Project comes from the diversion and storage of water from the San Joaquin River behind Friant Dam. The total available water on the San Joaquin River has been estimated at 2,200,000 AF. Of that, 800,000 AF have been designated as Class I supply. Class I supply is considered to be dependable in most years with shortages only in very dry years. Class II water is in excess of Class I and is therefore much less dependable. FID has a contract with the United States Bureau of Reclamation for 75,000 AF of Class II water from this source. The agreement between the City and FID requires the District to make available to the City the proportional share of all surface water available to the District although it does not allow the City to directly receive FID's Central Valley Project supplies. Therefore, FID is required to make a like amount of Kings River (or any other surface) water available to the City for its proportional share of Class II Central Valley Project supplies. FID's Class II contract has received an average 13,577 AFY with the actual number ranging from zero to the full 75,000 AF depending upon the nature of each water year over that period. (Provost & Pritchard, 2021B).

GROUNDWATER RELIABILITY

There are many factors that can affect groundwater supply reliability, including current storage conditions, water quality, seasonal groundwater level variations and climate change. Reduced use by the City, combined with seasonal variations such as intense wet seasons, can result in increased groundwater table elevation.

Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040, as required. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. In the 2010 and 2015 UWMPs, the City's groundwater supplies were shown to be increasing with population growth into the future. The historical volume of groundwater pumped by the City from 2016 to 2020 ranged from 10,956 in 2019 to as high as 13,187 in 2016. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated

sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

The City has been searching for additional land to construct another dedicated groundwater recharge facility in the City. The facility will likely be in North Clovis upgradient of City wells. A minimum of 20 to 40 acres is desired with a minimum recharge capability of 1,500 to 3,000 AF per year. An additional project that the City is pursuing in cooperation with FID, FMFCD, and the City of Fresno, is either reoperation of Big Dry Creek Detention Basin, known as the Redbank-Fancher Creeks Flood Control Project, to allow storage of East Side Stream Flood releases or a project to increase recharge capabilities upstream of the Basin. This is currently in the study phase. (Provost & Pritchard, 2021B).

In addition, there are two banking facilities, the Waldron Banking Facilities (WBF) and Boswell Groundwater Banking Facility (BGBF), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City plans on taking the water in dry years to augment supply. (Provost & Pritchard, 2021B).

The groundwater supplies the City relies upon are not adjudicated. The surface water supplies have either long-range contracts or newly executed contracts to document quantities and availability to the City. (Provost & Pritchard, 2021B).

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The 'sustainable yield' is defined as the amount of groundwater pumping that can occur while maintain groundwater at sustainable levels and avoiding undesirable results. The sustainable yield can be estimated as the total groundwater recharge (from natural and artificial sources) minus the groundwater outflow (as shown below). The GSP of the North Kings Groundwater Sustainability Agency indicates that the sustainable yield of the groundwater basin is approximately 1,140,000 AFY/acre (1,360,000 AF -220,000 AF).

With regards to the 2020 groundwater supply, as provided by the City's UWMP, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources. Groundwater pumping accounted for 26 percent of the City's total available water supply, but will

be reduced over the planning horizon for the UWMP. The actual 2020 supply for the service area consisted of surface water, groundwater, supply water from storage and recycled water; the overall supply available to the City for 2020 was 53,748 AF. (Provost & Pritchard, 2021B). Future supply projections through 2040 are shown in Table 6-13.

TABLE 3.14-6: PROJECTED GROUNDWATER SUPPLY, AFY

	2020	*2025*	*2030*	*2035*	*2040*
Assumed Groundwater Supply	12,105	11,429	10,753	10,076	9,400

SOURCE: PROVOST & PRITCHARD, 2021B, TABLE 6-13.

REGULATORY SETTING

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for Methyl Tertiary Butyl Ether (MTBE) and other oxygenates.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An "urban water supplier" is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier's water demand management measures. The urban water supplier should make every effort to ensure the

appropriate level of reliability in its water service is sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan.

Safe Drinking Water Act

The federal Safe Drinking Water Act, as passed in 1947 and amended in 1986 and 1996, is the Country's primary law regulating drinking water quality and is implemented by the United States Environmental Protection Agency (US EPA). The Safe Drinking Water Act authorizes the US EPA to set national health-based standards for drinking water and requires actions to protect drinking water and its sources. Additionally, it provides for treatment, monitoring, sampling, analytical methods, reporting, and public information requirements. Implementation of the Act, in California, is under the jurisdiction of the California Department of Public Health (CDPH), Division of Drinking Water and Environmental Management. Drinking Water regulations are set forth in the California Code of Regulations (CCR), Titles 7 and 22.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (Water Code Sections 11950 – 11954).

Consistent with California Water Code Sections 11950 – 11954, the City has implemented various water conservation efforts, as well as a Water Shortage Contingency Plan that identifies actions that can be taken to respond to catastrophic interruption of water supply.

California Water Code

Water Code section 10910 states:

> *10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).*
>
> *10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.*
>
> *10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:*

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

Additionally, Water Code section 10910 states:

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as over drafted or has projected that the basin will become over drafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long term overdraft condition.

10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

Senate Bill (SB) 610

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a WSA required under SB 610.

Water Code Section 10910 (c)(4) states "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This

information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project.

In addition, SB 610 requires the preparation of a WSA if a project meets the definition of a "Project" under Water Code Section 10912 (a). The code defines a "Project" as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a "Project" includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system.

Based on the following, SB 610 applies to the proposed Project:

1. The proposed Project is subject to CEQA and an EIR is required.
2. The proposed Project, with up to 605 proposed residential dwelling units, meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (1) as defined for residential development.

The proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Thus, a WSA, as required by these criteria under SB 610, has been prepared for the Project. The WSA is included in Appendix J of this EIR.

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500

dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Executive Order B-37-16

In May 2016, Governor Edmund G. Brown, Junior, signed Executive Order B-37-16 (Executive Order), Making Water Conservation a California Way of Life. The Executive Order directed DWR to work with the State Water Resources Control Board (State Water Board) to develop new water use targets as part of a permanent conservation framework for urban water agencies. The targets will build upon requirements established in the 2009 Water Conservation Act, but will strengthen standards for indoor residential per capita water use, outdoor irrigation, commercial, industrial and institutional (CII) water use, and water lost through leaks. DWR will be establishing interim water use targets by 2018, with final standards to be published by 2021. Agencies will need to demonstrate progress towards achieving final compliance in 2025 (DWR, 2017).

City of Clovis General Plan

Policies: Land Use Element

- Policy 4.2 Surface water entitlements. The city should not approve annexation unless any and all surface water entitlements are retained; any and all surface water entitlements shall be transferred to the city upon development.

Policies: Public Facilities and Services Element

- Policy 1.1 New development. New development shall pay its fair share of public facility and infrastructure improvements.
- Policy 1.2 Water supply. Require that new development demonstrate contractual and actual sustainable water supplies adequate for the new development's demands.
- Policy 1.3 Annexation. Prior to annexation, the city must find that adequate water supply and service and wastewater treatment and disposal capacity can be provided for the proposed annexation. Existing water supplies must remain with the land and be transferred to the City upon annexation approval.
- Policy 1.4 Development-funded facilities. The City may require developments to install onsite or offsite facilities that are in excess of a development's fair share. However, the City shall establish a funding mechanism for future development to reimburse the original development for the amount in excess of the fair share costs.
- Policy 1.5 Recycled water. Use recycled water to reduce the demands for new water supplies. Support the expansion of recycled water infrastructure throughout Clovis and require new development to install recycled water infrastructure where feasible.
- Policy 1.6 Master plans. Periodically update water, recycled water, wastewater, and stormwater master plans and require all new development to be consistent with the current master plans.
- Policy 1.7 Groundwater. Stabilize groundwater levels by requiring that new development water demands not exceed the sustainable groundwater supply.

- Policy 1.8 Water facility protection. Protect existing and future water, wastewater, and recycled water facilities from encroachment by incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.

Policies: Open Space and Conservation Element

- Policy 3.5 Energy and water conservation. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.

City of Clovis Municipal Code

Municipal Code Chapter 3.10 Development Impact Fees, The purpose of this chapter is to establish a uniform set of procedures applicable to AB 1600 development impact fees that are adopted pursuant to the authority set forth in Government Code Section 66000 et seq. and the Municipal Code. These procedures are intended to apply to all AB 1600 development impact fees adopted by the City, regardless of whether there is an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee. If there is a conflict between this chapter and an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee, the provisions of this chapter shall control.

Chapter 6.5, Water System and Chapter 6.6, Wells, are contained within Title 6, Sanitation and Health. Chapter 6.5 contains five different articles that all pertain to specific aspects of the interconnected Water System the City and its residents rely on. Article 1 of Chapter 6.5 deals with Service Rates and Regulations; Article 2 discusses Main Extensions, Connections, and Frontage Chargers; Article 3 regulates Meters, Main Connections, and Laterals; Article 4 establishes rules for Heat Transfer Systems Utilizing Water; and Article 5 establishes Water Efficient Landscape Requirements. Chapter 6.6 regulates well drilling, prohibited acts, permits required, use requirements, recharge charges, and the use of drainage wells.

The City Municipal Code also contains Chapter 8.6, Plumbing Code. This Chapter adopts the California Plumbing Code and includes specific amendments.

Clovis Water Master Plan Update Phase III (2017)

The primary purpose of the Water Master Plan is to examine the feasibility of continued growth in the greater Clovis area from a water resource stand-point and develop a plan for implementation of facilities as well as development of a plan for acquisition of water supplies as the City continues to grow in an easterly direction with more limited groundwater supplies.

This report represents an update of the Phase 1 and 2 reports that were prepared in 1995 and 1999 respectively, that provided a blueprint for the future development of the city's water system. This report documents the past years' efforts in evaluating the existing system and developing the future plan for the system.

Clovis Wastewater Master Plan (2017)

The Clovis Wastewater Master Plan Update, Phase 3 was adopted in 2017. The wastewater master plan update process consisted generally of developing design criteria, defining wastewater service

areas, developing wastewater flow projections, analyzing and designing collection system pipelines, and summarizing results. The Wastewater Master Plan Update, Phase 3, (2017 Master Plan) is the latest phase of an effort begun in 1995 to update the City's Wastewater Master Plan. The preceding phase, referred to as the Wastewater Master Plan Update, Phase 2, (2008 Master Plan) was documented in a final report dated June 30, 2008. Under the 2017 Master Plan, the core of the city is planned to discharge to regional trunk sewers and on to the Fresno-Clovis RWRF in southwest Fresno.

Clovis Recycled Water Master Plan (2017)

The City of Clovis released a Recycled Water Master Plan in 2017. This Plan demonstrates how the water systems in the City will accommodate future population growth. Due to the impact of a five-year drought throughout the state, the scarcity of water supplies has resulted in significant motivation to continue investment in the use of recycled water to meet water demands. The purpose of the Clovis Recycled Water Master Plan Update is to evaluate current recycled water use, identify additional market opportunities as defined in the adopted General Plan, and produce an implementation plan incorporating recycled water as a significant portion of the Clovis' water supply. The efficient use of surface water and groundwater resources is critical to maintaining sustainability of communities throughout the Central Valley. To help alleviate potable water demands placed on these supplies, recycled water is a key source of supply many communities, including Clovis, utilize to enhance management of local water resources.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new water treatment facilities or expansion of existing water facilities, the construction of which could cause significant environmental effects. (Less than Significant)

The Project area will be annexed to the City and will require an extension of existing potable and non-potable systems. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project.

The City's ST-WRF produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

POTABLE WATER SYSTEM

The Project Site would be served by a new potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The proposed on-site water distribution system will have various points-of-connection to existing City mains. The Project will connect to the existing water main lines along nearby roadways. Additionally, an internal looped system of water lines will be installed within the Project Site.

NON-POTABLE WATER SYSTEM

The Project Site would include the development of an on-site non-potable water distribution system that would eventually provide irrigation water to planned parks, open space, and landscaped areas. This system will include a non-potable irrigation well which will be constructed by the project. All landscape irrigation is to be installed with non-potable components.

CONCLUSION

The proposed Project site will provide an adequate potable and non-potable water distribution systems in strict accordance with City Master Plans and standards. Furthermore, the construction of the new water facilities, which are associated with future buildout of the proposed Project, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the water system and all construction activities within the Development Area of the Project Site, are addressed throughout this EIR. There are no other anticipated impacts associated with the infrastructure construction activities beyond what is already discussed throughout this EIR. The installation of the water system infrastructure to serve the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.14-4: The proposed Project does not have the potential to have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. (Less than Significant)

The Project site would be served by a new potable and non-potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing city mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's ST-WRF produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

Proposed Project: The Project site is approximately 155 acres within 39 Assessor parcels (APNs). This includes the Development Area (77acres), and the Non-development Area (78 acres). The proposed Project includes an annexation of three APNs totaling approximately 77 acres; this includes the Development Area. The Tentative Subdivision Map would result in the subdivision of a total of approximately 77 acres into 605 single family residential units, with an additional 52 out lots for roads, utilities, greenspace, landscaping, and pedestrian paths. The Non-development area includes the parcels being annexed that will not be entitled for subdivision or development.

Projected Water Demand for the Proposed Project: As discussed above, water would be delivered to the Project via the City's existing and planned distribution system. The Project would receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. According to the Water Supply Assessment prepared for the proposed Project, the proposed Project has an associated Land Use-based Water Demand Factor (WDF of 3.3 AFY/acre associated with Medium High Density Residential (MHDR) based on the City's UWMP. The projected water demand for the proposed Project is shown in Table 3.14-7. The total projected annual potable water demand for the Project is projected to be 255.8 AFY.

TABLE 3.14-7: PROJECTED WATER DEMAND FOR BUILDOUT OF THE PROPOSED PROJECT

LAND USE	*UNIT FACTOR*	*ACREAGE*	*WATER DEMAND (AFY)*
Medium High Density Residential (MHDR)	3.3	77.5	255.8
Total	**--**	**77.5**	**255.8**

NOTES: BASED ON LAND USE-BASED WATER DEMAND FACTOR (WDF) OF 0.7 AFY/ACRE. AFY = ACRE-FEET PER YEAR.
SOURCE: TRACT 6205, NORTHWEST SPHERE OF INFLUENCE EXPANSION AREA. WATER SUPPLY ASSESSMENT (PROVOST & PRITCHARD CONSULTING GROUP, 2022).

As shown in table 3.14-7, the total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year as shown in Table ES-3 of the 2020 UWMP. This indicates an ability of the City to serve this project in the interim while additional supplies are acquired to accommodate full build-out of the GP.

Projected Water Supply for the Proposed Project: Water demands for the proposed Project will be served using the City's existing and future portfolio of water supplies. The inclusion of existing and planned future supplies is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

The applicants for the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable water supplies to the Project site.

Determination of Water Supply Sufficiency Based on the Requirements of SB 610: Water Code section 10910 states:

10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

Pursuant to Water Code section 10910(c)(4) and based on the technical analyses described in the UWMP, the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project as shown in table 3.14-7, in addition to existing and planned future uses.

A comparison of the City's projected potable and raw water supplies and demands is shown in Table 3.14-8 for Normal, Single Dry, and Multiple Dry Years. Demand within the City's service area is not expected to exceed the City's supplies in any Normal year between 2020 and 2040. From this analysis, the City's water demands are not expected to exceed water supplies in Single Dry Years or Multiple Dry Years.

TABLE 3.14-8: SUMMARY OF POTABLE AND RAW WATER DEMAND VERSUS SUPPLY DURING HYDROLOGIC NORMAL, SINGLE DRY, AND MULTIPLE DRY YEARS

HYDROLOGIC CONDITION		*SUPPLY AND DEMAND COMPARISON, AFY*			
		2025	*2030*	*2035*	*2040*
NORMAL YEAR					
Available Potable and Raw Water Supply		50,739	58,937	65,034	74,650
Total Water Demand		39,737	42,824	46,422	52,598
Potential Surplus (Deficit)		11,002	16,113	18,612	22,052
Supply Shortfall, Percent of Demand		-	-	-	-
SINGLE DRY YEAR					
Available Potable and Raw Water Supply		37,839	43,587	47,233	53,109
Total Water Demand		34,272	37,359	40,957	47,133
Potential Surplus (Deficit)		3,567	6,228	6,276	5,976
Supply Shortfall, Percent of Demand		-	-	-	-
MULTIPLE DRY YEAR					
Multiple Dry Year 1	Available Potable and Raw Water Supply	46,784	54,607	60,330	68,999
	Total Water Demand	36,489	39,422	42,840	48,707
	Potential Surplus (Deficit)	10,294	15,185	17,489	20,292
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 2	Available Potable and Raw Water Supply	45,093	52,576	57,958	66,095
	Total Water Demand	34,183	36,962	40,200	45,758
	Potential Surplus (Deficit)	**10,910**	**15,614**	**17,758**	**20,337**
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 3	Available Potable and Raw Water Supply	41,895	48,310	52,625	59,717
	Total Water Demand	31,346	33,969	37,028	42,277
	Potential Surplus (Deficit)	10,550	14,341	15,597	17,440
	Supply Shortfall, Percent of Demand	-	-	-	-
	Available Potable and Raw Water Supply	37,839	43,587	47,233	53,109
	Total Water Demand	28,005	30,474	33,353	38,293

Multiple Dry Year 4	Potential Surplus (Deficit)	9,834	13,112	13,881	14,815
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 5	Available Potable and Raw Water Supply	49,743	57,992	64,141	73,716
	Total Water Demand	37,825	40,758	44,176	50,043
	Potential Surplus (Deficit)	11,918	17,235	19,965	23,674
	Supply Shortfall, Percent of Demand	-	-	-	-

SOURCE: PROVOST & PRITCHARD, 2021B.

CONCLUSION

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a **less than significant** impact to water supplies.

3.14.3 STORMWATER

ENVIRONMENTAL SETTING

Stormwater throughout the City of Clovis is collected in Fresno Metropolitan Flood Control District's (FMFCD) basins. Unless the storm season is particularly wet, the collected stormwater is allowed to percolate into the soil as groundwater recharge. Additionally, the FMFCD allows the City to utilize 17 stormwater basins throughout the City's Service Area for recharge purposes. (Provost & Pritchard, 2021B).

FMFCD covers the entire Fresno/Clovis Metropolitan Area and is authorized to control storm waters within an urban and rural foothill watershed of approximately 400 square miles, known as the Fresno County Stream Group. The FMFCD provides storm drainage through a system of inlets, drainage pipes, drainage ponds, and a system of dams and channels upstream. This system provides the primary means of urban storm drainage control for the City of Clovis and its sphere of influence. New storm drainage improvements are made by either development fees or by formation of assessment or improvement districts. The City of Clovis has a representative on the FMFCD Board. (City of Clovis, 2014).

On September 16, 1994, the Central Valley Regional Water Quality Control Board (Regional Water Board) issued the first municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other Co-Permittees, including the City of Clovis. The Regional Water Board renewed the permit on May 31, 2013 (Order No. R5-2013-0080). (FMFCD, 2020).

The FMFCD operates and maintains all master plan improvements, including the retention basins. The City is responsible for operation and maintenance of all temporary facilities where master plan improvements are not complete. The City is also responsible for all surface flooding in streets and other areas where storm water cannot reach inlets and pipes quickly enough. Storm drainage collection facilities are designed for two-year storm capacity. Storm drain retention basins are designed for 50-year storm frequency. Development impact fees finance acquisition and construction of ponding basins. Storm drainage improvement districts fund development of storm drainage systems for existing urban areas. (City of Clovis, 2014).

Clovis is traversed by three natural stream systems. Each of these systems consists of sub streams or creeks that collect together to discharge to a centralized natural drainage channel. These systems are the Red Bank, Fancher, and Dog Creek System; the Dry and Dog Creek System; and the Pup Creek/Alluvial Drain System. The latter is a tributary of the original Dry Creek channel. These stream systems collect storm runoff from the foothills east of Clovis and convey such runoff through the Clovis/Fresno metropolitan areas to the Fresno Slough, which is located west of the City of Fresno. (County of Fresno, 2018).

The City's Public Utilities Department has three Stormwater Patrol teams, made up of 22 public utilities employees, to implement emergency flood control measures. The plan contains information and procedures to rapidly address flooding throughout the City. Contact information and team

assignment data is updated regularly as are geographic locations subject to flooding. Appendices include suppliers/contractors, storm basin list, problem drain lists, and partnerships and agencies with shared responsibility for storm preparedness, mitigation, and response. (County of Fresno, 2018).

Existing City Stormwater and Flood Control Facilities

Flood protection in Clovis is afforded by Big Dry Creek Dam on Dry Creek. Big Dry Creek Dam is located approximately 3.5 miles upstream of the City of Clovis. Its main purpose is flood control, and it has a storage capacity of 16,250 acre-feet. Big Dry Creek Reservoir has prevented an estimated $15 million in damage in the Fresno-Clovis area since its completion in 1948. (County of Fresno, 2018).

The Big Dry Creek Dam impounds stormwater runoff from Big Dry Creek in the Big Dry Creek Reservoir. The Big Dry Creek Reservoir is owned and operated by the FMFCD and is intended primarily for flood control of winter runoff from the Dry Creek and Dog Creek watersheds. In the 1990s, modifications were made to increase the capacity of the reservoir, and it now provides protection against the 200-year flood. (County of Fresno, 2018).

Under wet conditions, the Big Dry Creek Reservoir captures runoff and controls releases into artificial ditches and canals, which drain into either Little Dry Creek, located north of the reservoir, or in a southerly direction into Mill Ditch. Flows from Little Dry Creek and Mill Ditch eventually drain to the San Joaquin River. Flows from the reservoir can also be diverted into Dog Creek, which also eventually drains into the San Joaquin River. During dry weather conditions, the reservoir does not discharge water and is normally empty, with the exception of a 156-acre-foot residual pool. The top of the pool remains below the elevation of an existing discharge gate. (County of Fresno, 2018).

Further, on average, FMFCD's regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer. The stormwater basins also remove 50-80 percent of the typical stormwater pollutants. (FMFCD, 2020).

Mitigation activities continue to be done in accordance with applicable state and federal requirements for floodplain management and in coordination with the FMFCD. Additional mitigation measures for critical infrastructure protection and rehabilitation are done through the City's Capital Improvement Project (CIP) budget. To date, those mitigation projects have included fire station security, water/sewer infrastructure improvements and City Hall building rehabilitation. (County of Fresno, 2018).

Future Stormwater Drainage Demand and System Improvements

The 2016 Storm Fresno Metropolitan Flood Control District (FMFCD) Services Plan provides a comprehensive planning document to guide improvement and expansion of the City's storm drainage system to meet current and future needs in a safe and reliable manner while maintaining compliance with all applicable regulations.

The FMFCD has finalized the design of the Dry Creek Extension Basin located near Brawley and Annadale Avenues. This will be a rural flood control basin located southwest of the City of Fresno. It will provide storage for floodwaters flowing through Dry Creek and other canals, which will provide groundwater recharge benefits. The initial design of the basin was for a 20-acre basin site which is fully excavated. The FMFCD added an adjacent 23-acre site to provide additional storage. This basin is being constructed by the District and is not part of the Federal Redbank and Fancher Creeks Project. (FMFCD, 2017).

The FMFCD has identified four primary groups of construction projects: (1) the Redbank-Fancher Creeks Flood Control Project; (2) District LCA enhancement projects; (3) new development projects; and (4) other routine District maintenance and construction projects. (FMFCD, 2017).

The Corps' Redbank-Fancher Creeks Project, completed in the summer of 1993, provides the points of control for the flows that will pass through the rural streams storm and flood conveyance system. Under the LCA with the Corps, the FMFCD is obligated to ensure proper functioning of the Redbank Fancher Creeks Project components. Through implementation of the rural streams program, the FMFCD will improve conveyance capacities of existing channels where necessary, restore obstructed and eradicated channels, and once adequate capacity is achieved, maintain appropriate project conveyance capabilities. These efforts will involve close coordination with private property owners and developers to obtain necessary channel easement dedications. These dedications preserve flooding rights-of-way and allow District access to the stream channels for operation and maintenance. (FMFCD, 2017).

As future development needs warrant, local drainage facilities will be added to augment the flood control facilities. The FMFCD will review new development plans to ensure appropriate design of channels according to the Rural Streams Design Manual, which is currently being developed by the District. Other routine District activities include construction, repair, and maintenance of flood control structures throughout the rural streams/flood control system. (FMFCD, 2017).

REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for “any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters.” Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits “for the discharge of dredged or fill material into the navigable waters at specified disposal sites”: subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);

- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The California State Water Resources Control Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the San Joaquin River, and other waters in the surrounding area. In the city the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the City were established by the RWQCB and are listed in its Basin Plan.

National Pollutant Discharge Elimination System

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process,

the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Federal Emergency Management Agency

Fresno County is a participant in the National Flood Insurance Program (NFIP), a federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Department of Water Resources

The Department of Water Resources' (DWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include

within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

State Water Resource Control Board (State Water Board) Stormwater Strategy

The Stormwater Strategy is founded on the results of the Stormwater Strategic Initiative, which served to direct the State Water Board's role in Stormwater resources management. The Stormwater Strategy developed guiding principles to serve as the foundation of the Stormwater program; identified issues that support or inhibit the program from aligning with the guiding principles; and proposed and prioritized projects that the Water Boards could implement to address those issues. The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Stormwater (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board's Stormwater Program.

Stormwater Quality

The State Water Board adopted Order No. 2013-0001-DWQ in 2013, which requires that agencies regulate post-construction development (Provision E.12) through a number of different program elements. In response to this order, several permittees, including Clovis, and Fresno County collaborated together to develop the Fresno-Clovis Storm Water Quality Management Program, dated November 2013.

Fresno-Clovis Storm Water Quality Management Program (2013)

The Storm Water Quality Management Program (SWQMP) was developed pursuant to Order No. R5-2013-0080. The municipal NPDES stormwater permit (MS4 Permit) was issued to the Fresno Metropolitan Flood Control District (District), the cities of Fresno and Clovis, the County of Fresno (County), and the California State University at Fresno (CSUF) by the Central Valley Regional Water Quality Control Board (Regional Board) on May 31, 2013. The SWQMP represents the five-year management strategy for controlling the discharge of pollutants in stormwater and urban runoff from the Fresno-Clovis metropolitan area to the during the third Permit term (2013-2018).

The SWQMP includes specific pollution prevention and control practices for Fresno-Clovis urban drainage system planning, design, construction, and maintenance. The Program also includes public education to prevent stormwater pollution; specifies construction, industrial/commercial, municipal, and new development control practices; procedures to prevent and respond to illicit discharges and connections; monitoring to assess stormwater impacts on receiving waters; and program effectiveness assessments (PEA) to evaluate the effectiveness of best management practices (BMPs).

To address the core program objectives and targeted stormwater pollutants and to ensure compliance with MS4 Permit requirements, the SWQMP incorporates a series of control measures, performance standards, and implementation schedules that provide for a long-term, comprehensive, and multidisciplinary effort by the Permittees to continue to achieve water quality standards and protect beneficial uses of the San Joaquin River, creeks and canals.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

City of Clovis General Plan

Policies: Public Facilities & Services Element

- Policy 1.6 Master plans. Periodically update water, recycled water, wastewater, and stormwater master plans and require all new development to be consistent with the current master plans.

Policies: Environmental Health Element

- Policy 1.1 Flood zone. Prohibit development within the 100-year flood zone and dam inundation areas unless adequate mitigation is provided against flood hazards. Participate in the National Flood Insurance Program.

Policies: Open Space & Conservation Element

- Policy 3.1 Stormwater management. Encourage the use of low impact development techniques that retain or mimic natural features for stormwater management.
- Policy 3.2 Stormwater pollution. Minimize the use of non-point source pollutants and stormwater runoff.
- Policy 3.3 Well water. Prohibit the use of new private wells in new development.

City of Clovis Municipal Code

The purpose and intent of Chapter 6.7, Urban Storm Water Quality Management and Discharge Control, is to ensure the health, safety, and general welfare of citizens, and protect and enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the federal Clean Water Act (33 U.S.C. Section 1251 et seq.) by reducing pollutants in urban storm water discharges to the maximum extent practicable and by effectively prohibiting non-storm water discharges to the storm drain system.

Chapter 8.7, Planned Local Drainage Facilities and Improvements Development Requirements, Financing Mechanisms and Fees, was established due to the finding that the development of land substantially accelerates the concentration of surface and storm waters and that it is necessary to provide for the construction of and establish, and collect, fees to defray all or a part of the actual or the estimated cost of constructing planned local drainage facilities for the control and safe disposal of surface and storm waters from local drainage areas in order to promote and protect the public safety, peace, comfort, and convenience and the general welfare. Further, the Municipal Code also contains Chapter 8.12, Floodplain Management, which aims to promote the public health, safety, and general welfare of its citizenry through adequate floodplain and flood hazard management and mitigation.

Chapter 8.12 provides for floodplain management and regulates development in floodplains. A development permit must be obtained before construction or development within any area of special flood hazard. Permits require provisions for flood hazard reduction, including anchoring, flood-resistant materials, and construction methods to floodproof the structure.

Chapter 9.110 provides subdivision design and improvement requirements. Per Section 9.110.040, a grading plan is required to be submitted to and approved by the City Engineer prior to issuance of

a subdivision-level building permit. Subdivisions are required to incorporate appropriate erosion and sediment control measures.

Chapter 9.28 contains landscaping standards and requires a landscape design plan, irrigation design plan, and soil analysis in order to reduce runoff and control soil erosion as part of the landscape documentation package.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-5: The proposed Project has the potential to require or result in the construction of new stormwater drainage facilities, the construction of which could cause significant environmental effects. (Less than Significant)

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no

flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be **less than significant** and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

FMFCD will require lot coverage to be provided prior to submittal of improvement plans. The lot coverage is calculated by the District to include the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation. This calculation cannot be calculated at this time given that building plans and lot specific landscaping and site improvements have not been prepared. This very detailed level of design would be performed at either the improvement plan or building plan phase of the project. Ultimately, FMFCD charges a drainage fee that is calculated commensurate with the lot coverage calculation.

FMFCD reviews all grading and improvement plans for consistency with the FMFCD Master Plan. This review ensures that grading does not have an adverse impact to major storm conveyance and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. They require all projects to provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

The initial review by FMFCD has indicated that the "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1." The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). FMFCD has indicated that the existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. FMFCD has indicated that the "Development Area" is required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. FMFCD indicated that the "Development Area" may either make improvements to the existing pipeline system to provide additional capacity or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. FMFCD requested that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of design prior to preparing a grading plan.

FMFCD noted that the construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities (as shown on Exhibit No. 1 of their letter), will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by in Tracts 6292 and 6344. If these optional facilities are not constructed, FMFCD recommends temporary facilities until permanent service is available.

FMFCD noted that the "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area." The "Development Area" shall verify to the satisfaction of FMFCD that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

FMFCD noted that the "Development Area" must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns, some of the streets located within the "Development Area" may need to be resized or reconfigured (including, but not limited to, streets that include traffic calming curbs) to pass larger event storms. FMFCD approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a **less than significant** impact relative to this topic.

3.14.4 SOLID WASTE

ENVIRONMENTAL SETTING

The City Solid Waste Division coordinates the collection and disposal of solid waste generated by residential and commercial customers located within the City of Clovis. Private vendors, under City contract, collect waste from select commercial customers and recyclables and yard wastes from residential customers. (City of Clovis, 2014).

The City Solid Waste Division conducts all operations necessary to landfill City refuse in accordance with county, state, and federal requirements. The Clovis landfill is an active Class III landfill which accepts municipal solid waste that is currently permitted through the year 2066.

Community Cleanup Program provides single-family residents with a semiannual curbside removal of up to six cubic yards of non-hazardous residential waste. Eligible residents are permitted to place waste to be removed in front of the curb to their residence two weeks prior to their scheduled pick-up day. The program contributes to an overall cleaner community and discourages illegal dumping. (City of Clovis, 2014).

Waste Collection Services

The City of Clovis Public Utilities Department, and Solid Waste Division, oversee solid waste collection services for the Clovis area. Recycling and greenwaste collection in the City of Clovis is provided by a contract service with Republic Services. The Public Utilities Department works to meet commercial and residential demands in a low cost and environmentally conscious manor. The City of Clovis employs the "single stream" method of recycling in which all recyclable material (other than green waste) goes into the blue Recycling toter. (City of Clovis, 2022).

Waste Disposal Facilities

The City of Clovis is serviced by several landfills, but primarily by the City of Clovis Landfill and the American Avenue Disposal Site. In 2019, California Department of Resources Recycling and Recovery reports that the Clovis Landfill handled over 63,500 tons of waste, and the American Avenue Disposal Site saw over 11,500 tons of waste. (Cal Recycle, 2019).

CLOVIS LANDFILL

The Clovis Landfill is located at 15679 Auberry Road. The landfill has been in commission for several decades, and is consistently maintained by the City, and by BSK Associates; the City partners with BSK Associates to perform service tests that monitor landfill operations and impacts.

BSK's environmental and geotechnical engineering services to the City at the Clovis Landfill date back to the mid-1970s with the preparation of a Landfill Master Plan, Design, Drainage, Liners and Seepage Control. Subsequent services included the installation of groundwater and soil gas monitoring network, monitoring identified releases of volatile organic compounds and the Evaluation Monitoring Program (EMP) was developed and implemented to investigate the extent of the problem. The site hydrogeology is complex; groundwater containing VOCs was found in

fractured bedrock, metamorphic rock, decomposed metamorphic rock and alluvium. A creek at the base of the landfill effectively acts as a boundary to horizontal migration of VOCs. The extent of VOCs in groundwater has been defined. (BSK, 2022).

Additional issues confronting the City included excessive levels of methane at the landfill boundary, limited air space (active life) and shortage of cover material. To address these issues, BSK recommended in 1996 that a feasibility study be performed to evaluate the viability of reconstructing the unlined portion of the landfill (comprising about 20 acres with 2.5 million cubic yards of landfill materials). The feasibility study concluded that reconstruction would generate sufficient materials for daily cover needs, add an additional 15 years to the active life, and address landfill releases to groundwater through source elimination. Subsequent monitoring has identified concurrent declines in groundwater VOCs and in landfill gas methane concentrations. The landfill reclamation was completed in 2010 and extended the useful life of the landfill by an estimated 35 years. (BSK, 2022).

BSK currently performs the following Detection and Correction Action Monitoring Program tasks at the Clovis Landfill:

- Monthly sampling of landfill leachate
- Quarterly perimeter screening of methane monitoring wells
- Quarterly water level measurements
- Semi-annual groundwater monitoring
- Semi-annual monitoring of pan lysimeters/vadose zone
- Surface water sampling
- Preparation of Semi-Annual Monitoring Reports
- Five-Year Sampling for groundwater, leachate, and surface water
- Installation of groundwater monitoring wells

BSK also has provided the following services to Clovis Landfill:

- Evaluation Monitoring Program
- Sampling and Analysis Plan
- Non-Water Release Corrective Action Plan
- Water Release Corrective Action Financial Assurance Plan
- Subsurface Drainage Collection Design Consultation and Construction Oversight
- Liner Construction Earthwork Observation and Field Testing
- Geologic and Hydrogeologic Investigations
- Storm Water Pollution Prevention Plans
- Investigations of Subsurface Drainage Discharge Treatment and Reuse
- Soil Gas Monitoring Well Destruction

(BSK, 2022).

Solid Waste Generation Rates and Volumes

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the City of Clovis between 2010 and 2020 are shown in Table 3.14-9. As shown, the per capita waste generation rate decreased from 4.1 to 4.0 lbs./person/day over the 10-year (2010-2020) period. In addition, the total annual disposal tonnage in Clovis increased by 14,865 tons over the 2010-to-2020-time span. With the passage of SB 1016, per capita disposal rate is used to determine the diversion progress of a city and not the jurisdictional diversion rates. Therefore, a population increase resulting in the generation of more overall city waste does not affect the jurisdiction's ability to meet its waste goals.

TABLE 3.14-9: SOLID WASTE GENERATION RATES

YEAR	*WASTE GENERATION RATE (LBS./PERSON/DAY)*	*POPULATION*	*TOTAL DISPOSAL TONNAGE (TONS/YEAR)*
2010	4.10	95,480.00	71,202.74
2011	3.40	97,218.00	60,354.45
2012	3.30	98,611.00	60,132.17
2013	3.00	99,983.00	53,954.32
2014	3.20	102,188.00	59,098.66
2015	3.50	104,339.00	66,168.03
2016	3.70	108,109.00	73,642.65
2017	3.70	110,532.00	74,994.56
2018	3.90	113,895.00	80,919.57
2019	3.70	117,003.00	77,958.05
2020	4.00	118,741.00	86,067.32
2021	4.40	121,667.00	97,186.92

SOURCE: CAL RECYCLE, 2021

Table 3.14-10 presents the City's waste disposal rate targets relative to the actual rates achieved on a per capita basis. It is noted that the City is surpassing waste generation rate targets for over a decade. In accordance with AB 939, which required municipalities to aggressively pursue Municipal Solid Waste (MSW) source reduction and recycling, the City continues to meet and exceed all AB 939 goals. The various solid waste management actions adopted by the City include, but are not limited to, recycling and yard waste programs for residents and businesses, public education and public outreach awareness events, and school recycling and composting.

TABLE 3.14-10: CITY OF CLOVIS WASTE DISPOSAL RATE TARGETS (POUNDS PER PERSON/DAY)

YEAR	POPULATION		EMPLOYMENT	
	TARGET	ACTUAL	TARGET	ACTUAL
2010	4.7	4.10	15.5	15.80
2011	4.7	3.40	15.5	12.30
2012	4.7	3.30	15.5	12.30
2013	4.7	3.00	15.5	10.90
2014	4.7	3.20	15.5	10.40
2015	4.7	3.50	15.5	11.40
2016	4.7	3.70	15.5	12.10
2017	4.7	3.70	15.5	11.90
2018	4.7	3.90	15.5	12.90
2019	4.7	3.70	15.5	12.00
2020	4.7	4.00	15.5	13.20
2021	4.7	4.40	15.5	15.10

SOURCE: CAL RECYCLE, 2021.

Landfill Capacity

As stated, solid waste from Clovis is primarily landfilled at the City of Clovis Landfill. Clovis Landfill is currently permitted to accept no more than 2,000 tons per day. The allotted disposal area is 76.3 acres, and it is designed to hold 7.8 million cubic yards of inert or designated wastes. The remaining capacity is 7.74 million cubic yards. At that time the capacity is reached, the City can utilize other landfills and recycling facilities within the greater Fresno-Clovis area. Other landfills used in the region include Fairmead, Avenal, Rice Road Recycle and Jefferson Avenue Station, among others. All landfills in the region are summarized in Table 3.14-11 below. Table 3.14-12 summarizes the City of Clovis' disposal rate targets, as identified by Cal Recycle.

TABLE 3.14-11: CITY OF CLOVIS LANDFILL SUMMARY

LANDFILL	LOCATION	MAXIMUM DAILY THROUGHPUT (TONS/DAY)	REMAINING CAPACITY (CUBIC YARDS)	ANTICIPATED CLOSURE DATE
Clovis Landfill	Clovis	2,000	7.74 million	2066
American Avenue Disposal Site	Kerman	2,200	29.39 million	2031
Fairmead	Madera	1,100	5.55 million	2028
Avenal Regional Landfill	Avenal	6,000	28.9 million	2056
Rice Road Recycling & Transfer Station	Fresno	400	--	--
Jefferson Avenue Transfer Station	Fresno	1,250	--	--

SOURCE: CAL RECYCLE, 2022B.

REGULATORY SETTING

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

California Integrated Waste Management Act (AB 939 and SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of AB 939 and SB 1322 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a "model ordinance" relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single-family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

California Mandatory Commercial Recycling Law (AB 341)

Assembly Bill (AB) 341 directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. The final regulation was approved by the Office of Administrative Law on May 7, 2012. The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Beginning on July 1, 2012, businesses have been required to recycle, and each jurisdiction has implemented programs that include education, outreach, and monitoring. Jurisdictions were required to start reporting on their 2012 Electronic Annual Report (due August 1, 2013) on their initial education, outreach, and monitoring efforts, and, if applicable, on any enforcement activities or exemptions implemented by the jurisdiction.

In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020. This is not written as a 75 percent diversion mandate for each jurisdiction. The 50 percent disposal reduction mandate still stands for cities, counties, and State agencies (including community colleges) under AB 939. CalRecycle continues to evaluate program implementation as it has in the past through the Annual Report review process for entities subject to either AB 939.

Assembly Bill 1826 Mandatory Commercial Organics Recycling

In October 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (please note, however, that multi-family dwellings are not required to have a food waste diversion program). Organic waste (also referred to as organics) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Starting on January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

SB 1374 (Construction and Demolition Waste Materials Diversion)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

AB 2176 (Montanez, Chapter 879, Statues of 2004)

This law requires the largest venue facilities and events (as defined) in each city and county to plan and implement solid waste diversion programs, and annually report the progress of those upon the request of their local government. In turn, local jurisdictions must report to the CIWMB waste diversion information for the top 10 percent of venues and events by waste generation.

A large event is defined as:

1. Serves an average of more than 2,000 individuals per day of operation (both people attending the event and those working at it—including volunteers—are included in this number); and

2. Charges an admission price or is run by a local agency.

The bill specifically includes public, nonprofit, or privately owned parks, parking lots, golf courses, street systems, or other open space when being used for an event, including, but not limited to, a sporting event or a flea market in addition to events that meet both of the above.

A large venue is defined as:

- A permanent facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation (both people attending the event and those working at it—including volunteers too—are included in this number).

Venues include, but are not limited to airports, amphitheaters, amusement parks, aquariums, arenas, conference or civic centers, fairgrounds, museums, halls, horse tracks, performing arts centers, racetracks, stadiums, theaters, zoos, and other public attraction facilities.

Senate Bill 1383 Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reductions

In September 2016, Governor Brown signed SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. The bill codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, in order to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California's most at-risk communities, and on the environment.

As it pertains to solid waste, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

City of Clovis General Plan

Policies: Community Facilities Element

- Policy 2.1 Minimize landfill disposal of solid waste. Promote solid waste source reduction, reuse, and recycling; composting; and the environmentally-safe transformation of wastes.
- Policy 2.2 Waste diversion rate. Meet the state's current and future waste diversion goals through the city's recycling and diversion programs.
- Policy 2.3 Expanded recycling. Increase recycling by commercial, industrial, and multifamily generators.
- Policy 2.4 Green and household hazardous materials waste. Encourage citywide participation in green waste reduction and household hazardous waste disposal programs.
- Policy 2.5 Clovis landfill. Maintain at least 15 years of ongoing landfill capacity.
- Policy 2.6 Solid waste facility encroachment. Protect existing or planned solid waste facilities from encroachment by incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.

Clovis Municipal Code

Municipal Code Chapter 3.10 Development Impact Fees, the purpose of this chapter is to establish a uniform set of procedures applicable to AB 1600 development impact fees that are adopted pursuant to the authority set forth in Government Code Section 66000 et seq. and the Municipal Code. These procedures are intended to apply to all AB 1600 development impact fees adopted by the City regardless of whether there is an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee. If there is a conflict between this chapter and an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee, the provisions of this chapter shall control.

The Municipal Code regulates garbage and trash operations through Chapter 6.3, Garbage and Rubbish. This Chapter allows the City monitor and regulate all garbage, rubbish, greenwaste, and recyclables, the containers the materials are collected in, and the collection process itself. This Chapter establishes collection and collection points (Chapter 6.3.06) and collection rates (Chapter 6.3.08). Chapter 6.3.1, Recycling and Diversion of Construction and Demolition Debris, and Chapter 6.3.2, Mandatory Organic Waste and Disposal Reduction Regulations, are also contained in this Title, and further authorize the City to maintain public services.

3.14 UTILITIES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

- 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; and/or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-6: The proposed Project has the potential to be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and comply with federal, State, and local statutes and regulations related to solid waste. (Less than Significant)

As previously described, permitted maximum disposal at the Clovis Landfill (SWIS Number 10-AA-0004) is 2,000 tons per day. The total permitted capacity of the landfill is 7.8 million cubic yards, of which, 7.74 million cubic yards remain. This landfill has an expected cease operation date in the year 2066. Additionally, the American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. As noted previously, the vast majority of waste disposed from the City of Clovis went to Clovis Landfill.

The City already utilizes the American Avenue Disposal Site, Avenal Regional Landfill, and Fairmead Solid Waste Disposal Site; in 2019 Clovis disposed of 11,586 tons to the American site, 358 tons to the Avenal site and 1,956 tons to the Fairmead site. (Cal Recycle, 2022C, D, E).

The Avenal Regional Landfill has the furthest operation date; the landfill is expected to operate until March of 2056. Avenal has a remaining capacity of 28,900,000 cubic yards, and has a current maximum permitted throughput of 6,000 tons per day.

New residential land uses in the Development Area of the Project site would increase the amount of solid waste generated by residents. The increase in growth and development as a result of the implementation of the proposed Project could result in an increase of solid waste to transfer stations and landfills, and could contribute to an increased demand for solid waste services throughout the City. Solid waste generated by the proposed Project was estimated based on CalRecycle generation rate estimates by use. Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[1]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid

[1] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

waste generated by the proposed Project is estimated to be 3.7 tons per day. This equates to roughly 0.185 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2066 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a **less than significant** impact.

3.14.5 ENERGY & TELECOMMUNICATIONS

ENVIRONMENTAL SETTING

Pacific Gas and Electric (PG&E) provides electrical service to the City of Clovis, its sphere of influence, and Fresno County. Electrical service is supplied by underground and overhead lines routed through three substations in the greater Clovis area. Telecommunications and phone services are provided by AT&T, and cable services are provided by Comcast. The hierarchy of establishing electrical power lines from generation stations to customers is as follows: transmission distribution; sub-transmission; and service. PG&E provides gas to customers through plastic and steel underground lines. The project site will not provide natural gas to the site. Residents not serviced by PG&E use propane fuel (City of Clovis, 2014).

REGULATORY SETTING

California Electrical Code

The California Electrical Code is codified in Title 24, CCR, Part 3. The Electrical Code contains regulations including, but not limited to, electrical materials, electrical wiring, overcurrent protection, grounding, and installation.

City of Clovis Municipal Code

Title 7, Public Works, of the Clovis Municipal Code contains Chapter 7.3, Underground Utility Districts, and Chapter 7.5, Underground Wiring. Chapter 7.3 regulates underground utility districts for the purposes of public necessity, health, safety, and welfare. Chapter 7.5 states that all utility facilities (including, but not limited to, electrical, communication and cable television lines) located within the boundaries of a development project property or to be installed in and for the purpose of supplying service to any development project shall be placed underground; and that the developer shall be responsible for compliance with the provisions of this section. It shall be the responsibility of the developer to make the necessary arrangements with the serving utility owner for the installation of an underground system, owned and operated by the utility owner. The developer shall submit satisfactory evidence thereof prior to the acceptance and approval of the development project.

The City officially adopts the California Electrical Code, and subsequent amendments, in Chapter 8.2, Electrical Code.

Chapter 9.42 Wireless telecommunications facilities, provides regulations regarding the location and design of wireless communications facilities, and intends to ensure that the installation of wireless communication facilities will not be detrimental to the City's public health, safety, or welfare. It is the intention of this chapter to treat wireless communications facilities, including antennas, in the same way that other mechanical equipment (e.g., air conditioners) are treated, and to require proper screening and architectural compatibility.

City of Clovis General Plan

Policies: Public Services & Utilities Element

- Policy 1.1 New Development. New development shall pay its fair share of public facility and infrastructure improvements.

Policies: Open Space & Conservation Element

- Policy 3.5 Energy and water conservation. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.
- Policy 3.6 Renewable Energy. Promote the use of renewable and sustainable energy sources to serve public and private sector development.
- Policy 3.7 Construction and design. Encourage new construction to incorporate energy efficient building and site design strategies.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded electrical, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-7: The proposed Project has the potential to require or result in the construction of new electrical, or telecommunications facilities, the construction of which could cause significant environmental effects. (Less than Significant)

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The potential environmental effects associated with construction and operation of the proposed Project, including the installation of the proposed electrical improvements in the roadway rights-of-way to serve the proposed development, are analyzed throughout this EIR under each

environmental topical area. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a **less than significant** impact.

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a discussion of CEQA-mandated analysis for cumulative impacts, significant irreversible effects, and significant and unavoidable impacts associated with the proposed Project.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual 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 (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> *…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 future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

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 general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) 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

3) 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.

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.

CUMULATIVE SETTING

The cumulative setting uses growth projections listed in the City of Clovis Municipal Services Review (2019), and State of California Department of Finance population forecast statistics. Table 4.0-1 shows growth projections.

TABLE 4.0-1: GROWTH PROJECTIONS

CALENDAR YEAR	*ESTIMATED POPULATION (CLOVIS)*	*ESTIMATED POPULATION (FRESNO COUNTY)*	*ESTIMATED POPULATION (CALIFORNIA)*
2025	136,350	1,053,955	40,808,001
2030	145,050	1,096,638	41,860,549
2035	153,490	1,1235,837	42,718,403
2040	161,580	1,170,525	43,353,414

SOURCES: FRESNO LAFCO – CITY OF CLOVIS MUNICIPAL SERVICE REVIEW AND SPHERE OF INFLUENCE UPDATE (2019), STATE OF CALIFORNIA DEPARTMENT OF FINANCE – POPULATION FORECAST PROJECTIONS (2020).

CUMULATIVE EFFECTS OF THE PROJECT

Cumulative settings are identified under each cumulative impact analysis. Cumulative settings vary because the area that the impact may affect is different. For example, noise impacts generally only impact the local surrounding area because noise travels a relatively short distance, while air quality impacts affect the whole air basin as wind currents control air flow and are not generally affected by natural or manmade barriers which would affect noise. Cumulative Project impacts are addressed and summarized below.

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related 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 (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the various General Plans in the area.

Project Assumptions

The proposed Project's contribution to environmental impacts under cumulative conditions is based on full buildout of the Project site. See Chapter 2.0, Project Description, for a complete description of the proposed Project.

Cumulative Impacts

Some cumulative impacts for issue areas are not quantifiable and are therefore discussed in general terms as they pertain to development patterns in the surrounding region. Exceptions to this are traffic, utilities, noise and air quality (the latter two of which are associated with traffic volumes), which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the proposed Project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

The cumulative setting for aesthetics is the City of Clovis and surrounding areas of Fresno County.

Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region (Less than Significant and less than Cumulatively Considerable)

As described in Section 3.1, Aesthetics and Visual Resources, development of the proposed Project would involve the annexation of 77 acres (Development Area) into the City of Clovis to develop up to 605 single family detached units, open space totaling approximately 5.54 acres including, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements.

In order to reduce the visual impacts of the development, development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, which includes design standards. The design standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining an aesthetic feel similar to that of the surrounding uses.

The loss of the visual appearance of the agricultural land on the site will change the visual character of the Project site in perpetuity, which some people are expected to view as a loss of a visually attractive amenity. Compliance with the requirements within the General Plan and Zoning Code

would reduce visual impacts to the greatest extent feasible; and the change of agricultural land to a landscaped subdivision is not necessarily a degrading of visual character. The General Plan EIR finds that new development would have a less than significant impact on aesthetics.

Under cumulative conditions, buildout of the General Plan for Clovis and the surrounding jurisdictions could result in changes to the visual character and quality of the City of Clovis through development of undeveloped areas and/or changes to the character of existing communities. Development of the proposed Project, in addition to other future projects in the area, would change the existing visual and scenic qualities of the City. However, the City of Clovis has adopted specific landscape and design standards to enhance the visual appearance of the Project site and adjacent areas. As such, this is a **less than significant** cumulative impact. As such, impacts relative to degradation of visual character would be a **less than cumulatively considerable contribution** and no mitigation is required.

Impact 4.2: Cumulative Damage to Scenic Resources within a State Scenic Highway (Less than Significant and Less than Cumulatively Considerable)

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system. As such, this is a **less than significant** cumulative impact. As such, impacts relative to scenic resources would be a **less than cumulatively considerable contribution** and no mitigation is required.

Impact 4.3: Cumulative Impact on Light and Glare (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. While implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs.

Overall, the proposed Project would introduce new sources of daytime and nighttime lighting within the Project site that do not currently exist. However, it is noted there are no specific features within the proposed Project that would create unusual light and glare. Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light spillover impacts on surrounding land uses in the absence of a lighting plan that includes

photometrics of the lighting. Any new lighting associated with development of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a less than significant level.

Future projects within Clovis and Fresno County would be subject to the light and glare standards established by the individual jurisdictions. These regulations are designed to minimize potential light and glare impacts of new development. Implementation of these regulations would ensure that future projects minimize their potential cumulative light and glare impacts resulting in a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to nighttime lighting and daytime glare would be a **less than cumulatively considerable contribution**.

AGRICULTURAL RESOURCES

The cumulative setting for agriculture and forest resources is all of Fresno County. According to the Department of Conservation, the total acreage of crop land in the county is approximately 1,355,142 acres. The gross value of agricultural production in Fresno County for 2021 was $8,085,567,000 which represents an increase of $117,167,000 or 1.47% above the previous year's revised total of $7,968,400,000.

Impact 4.4: Cumulative Impact on Agricultural Resources *(Less than Significant and Less than Cumulatively Considerable)*

The Project site is not under a Williamson Act Contract. However, as described in Section 3.2, development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map and as shown on Figure 3.2-1, to nonagricultural use. After looking at site-specific characteristics more closely for the Project site, it is noteworthy that the Department of Conservation's designations do not accurately and fully consider site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. To reconcile this inaccuracy and analyze the site-specific characteristics more fully, the Clovis General Plan calls for the use of the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversion. It is noted that the LESA model was developed by the Department of Conservation, which is the same agency that published the 2020 Important Farmland's Map.

The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project is documented on the LESA scoring sheets in Appendix B. The proposed Project has a final LESA score of 50.50, which is considered to be a significant impact only if the Land Evaluation and Site Assessment sub scores are each greater than or equal to 20 points. The proposed Project has a sub score of 32.50 for the Land Evaluation and a sub score of 18.0 for the Site Assessment, which means the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

After evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, it was determined that the conversion of the land on the Project site is not a significant impact. Therefore, implementation of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required. As such, impacts to agricultural resources would be a **less than cumulatively considerable contribution**.

AIR QUALITY

The cumulative setting for air quality impacts is the San Joaquin Valley Air Basin (SJVAB), which consists of eight counties, stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south.

Impact 4.5: Cumulative Impact on the Region's Air Quality (Less than Significant and Less than Cumulatively Considerable)

Under buildout conditions in Fresno County, the SJVAB would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, Fresno County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM_{10} and $PM_{2.5}$. Fresno County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the state and national attainment status for Fresno County.

As discussed under Impact 3.3-1 in Section 3.3, the SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. The SJVAPCD has established operations related emissions thresholds of significance as follows: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of sulfur oxides (SO_x), 15 tons per year PM_{10}, and 15 tons per year $PM_{2.5}$.

As shown in Table 3.3-6, operational emissions would not exceed the SJVACPD thresholds of significance for criteria pollutants. Additionally, as shown in Table 3.3-7, construction emissions would not exceed the SJVACPD thresholds of significance for criteria pollutants. As such, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable contribution**.

BIOLOGICAL RESOURCES

The cumulative setting for biological resources includes the Project site and the greater Fresno County region. Development associated with implementation of the local General Plan(s) would contribute to the ongoing loss of natural and agricultural lands in Fresno County, including the Project site. Cumulative development would result in the conversion of existing habitat to urban uses. The local General Plan(s), in addition to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout.

Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (Less than Significant and Less than Cumulatively Considerable)

Under cumulative conditions, buildout of the General Plan(s) within Fresno County will result in impacts to biological resources in the cumulative area through new and existing development. The General Plan(s) includes policies that are designed to minimize impacts to the extent feasible.

As described in Section 3.4, Biological Resources, construction in the Project site has the potential to result in impacts to special-status species in the region. Although there has been no documented sighting within the immediate area in, or near the Project site, the Project site provides potential habitat for several species, including those discussed in Section 3.4.

Mitigation Measure 3.4-1 requires measures to avoid or minimize impacts on other protected bird species that may occur on the site. In addition, Mitigation Measure 3.4-2 requires that, prior to grading, the Project applicant is required to conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats.

Implementation of Mitigation Measure 3.4-1 and Mitigation Measure 3.4-2 in Section 3.4 would reduce potentially cumulative impacts to a **less than significant** level. As such, impacts to biological resources would be a **less than cumulatively considerable contribution**.

CULTURAL AND TRIBAL RESOURCES

The geography of cultural resources impact can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. The cumulative setting for cultural resources includes all of the Fresno County. There are extensive cultural sites located in the region.

Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources (Less than Significant and Less than Cumulatively Considerable)

Cumulative development anticipated in the City of Clovis, including growth projected by adopted future projects, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.5, Cultural and Tribal Resources, no historic period resources were previously recorded in the Development Area.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

All future projects in the regional vicinity would be subject to their respective General Plans (e.g. City of Clovis, and Fresno County), each of which have policies and measures that are designed to ensure protection of undiscovered cultural resources. In addition, all discretionary projects in these jurisdictions would require environmental review per regulations established in CEQA.

development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to cultural resources would result in a **less than cumulatively considerable contribution**.

GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For these reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Clovis and vicinity.

Impact 4.8: Cumulative Impact on Geologic and Soils Resources (Less than Significant and Less than Cumulatively Considerable)

As discussed in Section 3.6 Geology and Soils, development of the proposed Project has limited potential for liquefaction, liquefaction induced settlement, and lateral spreading. However, mitigation measures provided in Section 3.6 ensure this impact will be less than significant. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. Seismic activity could come from a known active fault s in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, the City of Clovis has incorporated numerous policies relative to seismicity to ensure the health and safety of all people. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

Geologic and soils impacts tend to be site-specific and Project-specific. With the mitigation measures presented in Section 3.6, development of the proposed Project would not result in increased risks or hazards related to geologic conditions in the cumulative setting area, nor would it result in any off-site or indirect impacts. Development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to geologic and soil resources would result in a l**ess than cumulatively considerable contribution**.

GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

The cumulative setting for greenhouse gas emissions and climate change impacts for this analysis is Fresno County, which is the boundary for the California Air Resources Board's regional greenhouse gas emissions reduction targets.

Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions (Less than Significant and Less than Cumulatively Considerable)

Greenhouse gas emissions from a single Project will not cause global climate change; however, greenhouse gas emission from multiple projects throughout a region or state could result in a cumulative impact with respect to global climate change.

In California, there has been extensive legislation passed with the goal of reducing greenhouse gas emissions. The legislative goals are as follows: 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. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

As presented in the table, short-term construction emissions of GHGs are estimated at a maximum of approximately 776.8 MT CO_2e per year. As shown in the following table, the annual mitigated GHG emissions associated with the proposed Project would be approximately 5,071 MT CO_2e. Consistent with the population estimate provided by LSA in the Transportation Impact Analysis for the Project, the proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[1] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in the 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[2], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

Therefore, development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to greenhouse gas emissions would result in a l**ess than cumulatively considerable contribution**.

[1] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[2] The amortization period used for this calculation is 30 years.

Impact 4.10: Cumulative Impact on the Inefficient, Wasteful, or Unnecessary Use of Energy Resources (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the threshold as described by the *CEQA Guidelines*. Therefore, development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to energy resources would result in a l**ess than cumulatively considerable contribution**.

HAZARDS AND HAZARDOUS MATERIALS

The cumulative context for the analysis of cumulative hazards and human health impacts Fresno County, including all cumulative growth therein, as represented by full implementation of each respective General Plan (i.e., Clovis and Fresno County). As discussed in Section 3.8 Hazards and Hazardous Materials, development of the proposed Project would not result in any significant impacts related to this environmental topic with the implementation of the mitigation measures provided in Section 3.8.

Impact 4.11: Cumulative Impact Related to Hazards and Hazardous Materials (Less than Significant and Less than Cumulatively Considerable)

The proposed Project, in conjunction with cumulative development in the region, would include areas designated for a variety of uses as defined by the applicable General Plan. Cumulative development would include continued operation of, or development of, new facilities as allowed under each land use designation. New development would inevitably increase the use of hazardous

materials within the region, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers). Hazard-related impacts tend to be site-specific and Project-specific. The Project site is not associated with any existing hazardous materials spills; however, there are numerous areas throughout the County where hazardous conditions are present.

Development of the proposed Project would not result in significant increased risks of hazards in the cumulative setting area, nor would it result in any significant off-site or indirect impacts. Mitigation measures have been included to reduce the risk of on-site hazards associated with the use of on-site hazardous materials. Development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to hazards and hazardous materials would result in a **less than cumulatively considerable contribution**.

HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater, in the context of a groundwater basin. Because water resources are highly interconnected, the cumulative setting is based on Fresno County, which is located in the Tulare Lake Hydrological Region, which covers about 16,800 square miles and includes all of Kings and Tulare counties and most of Fresno and Kern counties. Cumulative development in this region, including the proposed Project, would impact the water quality and hydrological features of the Tulare Lake Hydrologic Region. Clovis is underlain by the Kings Groundwater Subbasin. The Kings Subbasin is bounded on the north by the San Joaquin River, on the west by the Delta-Mendota and Westside Subbasins, the south by the Kings River South Fork and the Empire West Side Irrigation District, and on the east by the Sierra Nevada foothills. Any matter that may affect water quality draining from the Project site will eventually end up in the Delta or within the groundwater basin.

Impact 4.12: Cumulative Increases in Peak Stormwater Runoff from the Project site (Less than Significant and Less than Cumulatively Considerable)

Development of the proposed Project would increase the amount of impervious surfaces in the Project site, which could increase peak stormwater runoff rates and volumes on and downstream on the Project site. However, the proposed Project includes an extensive system of on-site stormwater collection facilities to accommodate the increased stormwater flows that would originate in the Project site.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control

Board Requirements (SWRCB), City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of the FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a **less than significant** impact relative to this topic. As such, impacts related to stormwater runoff would result in a **less than cumulatively considerable contribution**.

Impact 4.13: Cumulative Impacts Related to Degradation of Water Quality (Less than Significant and Less than Cumulatively Considerable)

The San Joaquin River is specifically listed by the Central Valley Regional Water Quality Control Board (CVRWQCB) as an impaired water body due to mercury under the Clean Water Act. Mercury is a sediment-based pollutant that can be released into the water column during various in-water construction activities (e.g., construction of the storm drain outfall) that may disturb the sediment and cause turbidity. As a result, such activities may increase the likelihood of mercury exposure to the public and wildlife that utilize the San Joaquin River.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB.

The ongoing operational phase of the proposed Project (all phases) requires discharge of stormwater into the on-site detention basins, which would ultimately flow into the FMFCD system. The discharge of stormwater must be treated through BMPs prior to its discharge. The standards and regulations contained above would ensure that BMPs are implemented to reduce the amount of pollution in stormwater discharged from the Project site into the FMFCD system. Storm water drainage is managed through the implementation of BMPs to the extent they are technologically achievable to prevent and reduce pollutants. The City requires reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system

or watercourses. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would violate water quality standards.

The use of BMPs is intended to treat runoff close to the source during the construction and long-term operational phase of the Project to reduce stormwater quality impacts. The required erosion control measures are existing regulatory requirements. Development of proposed Project would have a **less than significant** impact relative to this topic. As such, impacts related to water quality would result in a **less than cumulatively considerable contribution**.

Impact 4.14: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff.

The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in several of the borings at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

The Project site is located in the Kings Groundwater Subbasin. As previously stated, the Kings Subbasin is recharged by water from sources including streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge at numerous facilities. Intentional recharge is conducted in recharge ponds and on some farm fields with compensation to landowners. The hardpan encountered on the Project site generally does not allow for a high infiltration rate. While the proposed Project would result in an increase in the amount of impervious surfaces within the Project site when compared to existing conditions, it is not anticipated that the proposed development would interfere with groundwater recharge, as much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from the Sierra Nevada snowmelt flowing downstream.

Water Supply, including any new demand on groundwater, is fully discussed in Section 3.14 Utilities and Services Systems. The Kings sub basin groundwater sustainability plan GSP has been accepted and approved to be in compliance by the Department of Water Resources. The proposed Project does not conflict with this GSP.

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies, interfere substantially with groundwater recharge, or conflict with the GSP. As such, development of the proposed Project would have a **less than significant** impact relative to this topic. As such, impacts related to groundwater supply or recharge would result in a **less than cumulatively considerable contribution**.

Impact 4.15: Cumulative Impacts Related to Flooding (Less than Significant and Less than Cumulatively Considerable)

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) map according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

LAND USE, POPULATION, AND HOUSING

The cumulative setting for land use and population impacts is the City of Clovis.

Impact 4.16: Cumulative Impact on Communities and Local Land Uses (Less than Significant and Less than Cumulatively Considerable)

Cumulative land use impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and Project-specific. As shown in Table 3.10-3, the Project is consistent with the City's existing General Plan policies and would not conflict with policies adopted to avoid or mitigate an environmental effect. When land uses are not consistent with a General Plan, there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density. The proposed General Plan land use designations for the Project site is shown on Figure 2.0-8 of Chapter 2.0: Project Description.

Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Clovis General Plan land use requirements.

Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Clovis General Plan land use requirements and would have a **less than significant** and **less than cumulatively considerable** impact relative to the Clovis General Plan.

The Clovis Zoning Code implements the General Plan. The Project site is currently within the jurisdiction of Fresno County. The Fresno LAFCo will require the Project site to be pre-zoned by the City of Clovis in conjunction with the proposed annexation. The pre-zoning request is for the R-1-PRD zoning designations over these lots.

- Single-Family Planned Residential Development Zoning (R-1-PRD). This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designation of the General Plan.

The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9.

The pre-zoning would go into effect upon annexation into the City of Clovis. These proposed zone changes would ensure that zoning will be consistent with the proposed General Plan designations within the Project site (Development Area). The zoning ordinance establishes permitted uses, development densities and intensities, and development standards through the R-1-PRD zone district and planned development permit process to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to any activities on the Project site. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code and will have a **less than significant** and **less than cumulatively considerable** impact relative to the Clovis General Plan.

In addition, the Fresno LAFCo policies discussed in Chapter 3.10: Land Use and Population are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an update to the *Clovis Municipal Service Review* in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts. As such, development of the proposed Project will have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.17: Cumulative Impacts on Population and Housing (Less than Significant and Less than Cumulatively Considerable)

As described in Section 3.10, the Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. Development of the Project would add up to 605 residential units. Therefore, because no housing is located in the Development Area, the proposed Project would not displace substantial numbers of people or existing housing.

Using the most recent Department of Finance (2022) estimate for the average number of persons residing in a dwelling unit in the City of Clovis of 2.81, the addition of up to 605 housing units could increase the population of the City by an estimated 1,700 persons.

The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density.

- **Medium High Density (MH).** This designation identifies areas appropriate small lot single family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre.

While the proposed Project will result in growth, it is not anticipated to significantly induce growth. development of the proposed Project will have a **less than significant** impact relative to this topic. As such, impacts related to population and housing would result in a **less than cumulatively considerable contribution**.

NOISE

The cumulative context for noise impacts associated with the proposed Project consists of the existing and future noise sources that could affect the Project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context.

Impact 4.18: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development (Less than Significant with Mitigation and Less than Cumulatively Considerable)

NOISE IMPACTS TO ON-SITE RECEPTORS DUE TO PROJECT GENERATED TRAFFIC

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6- foot sound walls.

OPERATIONAL NOISE INCREASES

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

EXTERIOR TRAFFIC NOISE AT PROPOSED USES

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan. Thus, this is considered a potentially significant impact.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls as required by Mitigation Measure 3.11-3. Furthermore, as required by Mitigation Measure 3.11-4, any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls. Implementation of Mitigation Measure 3.11-3 and Mitigation Measure 3.11-4 would ensure that these potential impacts are reduced to a **less than significant** level.

INTERIOR NOISE IMPACTS AT PROPOSED RESIDENTIAL USES

Modern construction typically provides a 25-dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB L_{dn}, or less, will typically comply with the City of Clovis 45 dB L_{dn} interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows, are generally required for exterior noise levels exceeding 70 dB L_{dn}.

As mentioned before, the Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. Based upon a

25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a **less than significant** impact.

CONSTRUCTION NOISE

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., Fowler Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise. Therefore, with implementation of the following mitigation measure will ensure that these potential impacts are reduced to a **less than significant** level.

CONCLUSION

With implementation of Mitigation Measure 3.11-1 to 3.11-4, development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to construction noise would result a **less than cumulatively considerable contribution**.

MITIGATION MEASURE(S)

*Implement **Mitigation Measures 3.11-1 through 3.11-4.***

PUBLIC SERVICES AND RECREATION

Cumulative setting would include all areas covered in the service areas of the Clovis Fire Department (CFD), Clovis Police Department (CPD), the City of Clovis Parks and Recreation Division, the Clovis Unified School District (CUSD), and any other relevant public services.

Impact 4.19: Cumulative Impact on Public Services and Recreation (Less than Significant and Less than Cumulatively Considerable)

Development of the proposed Project would contribute toward an increased demand for public services and facilities within the City of Clovis. It has been determined that the impacts to the CFD, CPD, City of Clovis Parks and Recreation Division, and CUSD, would be less-than-significant. The proposed Project would be subject to all fees that are paid toward the enhancement of public services within the City. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would assist in maintaining existing fire, police, schools, and park services. development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to public services would result in a **less than cumulatively considerable contribution**.

TRANSPORTATION AND CIRCULATION

Cumulative Conditions analyses for year 2028 and 2046 were performed to identify potential impacts of the Project under Cumulative AM and PM peak hour conditions. The project trip distribution was developed using select zone model runs obtained from the Fresno COG ABM.

Impact 4.20: Under Cumulative conditions, Project development would result in VMT increases that are greater than 87 percent of Baseline conditions (Cumulatively Considerable and Significant and Unavoidable)

Table 3.13-12 in Section 3.13 presents the existing (2019) Regional and Project VMT per Capita. As shown in Table 3.13-2, the Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT. The Project design features can help offset some of the VMT impacts of the Project.

Because the development would generate vehicle travel exceeding 15 percent below the established city-wide average under Existing and Cumulative Conditions, even with implementation of Project Design measures that provide mitigating effects, development of the proposed Project would have a **cumulatively considerable contribution** and **a significant and unavoidable** impact.

Impact 4.21: Under Cumulative conditions, the proposed Project would not conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities, or increase hazards due to a design feature, incompatible uses, or inadequate emergency access (Less than Significant and Less than Cumulatively Considerable)

The City of Clovis ATP (2022) and City of Clovis General Plan (2014) were reviewed to determine if the proposed Project results in any inconsistencies with adopted transportation related policies.

With recommended improvements described in those chapters, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program

where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, development of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, development of the proposed Project would be **less than significant** relative to this topic. The Project would result in a **less than cumulatively considerable contribution** to this topic.

UTILITIES

The cumulative setting includes all areas covered in the service areas of the City's wastewater system, water system, stormwater system, and the solid waste collection and disposal services.

Impact 4.22 Cumulative Impact on Wastewater Utilities (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would increase the amount of wastewater requiring treatment. According to the City's 2017 Wastewater Master Plan Update, single-family residential uses are estimated to generate 55 gallons per capita per day or 175 gallons per day per equivalent dwelling unit (edu). The Project site includes 605 single-family residential units. Using this rate, the proposed Projects would generate approximately 105,875 gallons per day of wastewater. Occupancy of the proposed Project would be prohibited without sewer allocation. An issuance of sewer allocation from the City's available capacity would ensure that there would be a final determination by the wastewater treatment and/or collection provider that there is adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. Additionally, any planned expansion to the RWTF with a subsequent allocation of capacity to the proposed Project would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

The Fresno-Clovis Regional Wastewater Treatment Facility is currently in compliance with the WDR requirements of Order No. 5-2013-0080 NPDES NO. CA00883500. The projected flows of the proposed Project are not expected to exceed the treatment capacity available for treatment. Full buildout of the proposed Project would slightly increase the existing treatment demand at the RWRF. As described above, the City must also periodically review and update their Utility Master Plans, including the Wastewater Master Plan, and as growth continues to occur within the City, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development. These pre-existing proactive efforts ensure the City would be able to reliably treat the wastewater as the community expands its population up to and through the next plant expansion, including with development of the proposed Project.

The City General Plan designates the Development Area as Rural Residential and therefore anticipated potential development. Given that projected wastewater generation volumes associated with the buildout of the Development Area would not exceed the projected wastewater generation volumes described in the Wastewater Master Plan and the Urban Water Management Plan, a described under Impact 3.14-1. Development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvements plans which undergo review by the Engineering Department to ensure consistency with the City's engineering standards. This improvement plan process will include full engineering design (i.e. location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Clovis standards and specifications.

Therefore, the installation of the wastewater collection and conveyance system infrastructure to serve the proposed Project would have a less than significant impact relative to this topic. The wastewater treatment plant would not require upgrades or improvements in order to serve the proposed Project. Therefore, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.23: Cumulative Impact on Water Utilities (Less than Significant and Less than Cumulatively Considerable)

The Project area will be annexed to the City and will require an extension of existing potable and non-potable systems. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's Water Reuse Facility produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

The proposed Project site will provide an adequate potable and non-potable water distribution systems in strict accordance with City Master Plans and standards. Furthermore, the construction of the new water facilities, which are associated with future buildout of the proposed Project, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the water system and all construction activities within the Development Area of the Project Site, are addressed throughout this EIR. In some cases, the direct and indirect impacts are potentially significant and warrant mitigation measures, while in other cases there are significant

and unavoidable impacts. The future water infrastructure would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant mitigation measures included in this EIR. The environmental impacts of constructing and operating the new water distribution infrastructure are discussed in Chapters 3.1 through 3.9, 3.14, and 4.0 of this Draft EIR. Therefore, development of the proposed Project would have a less than significant impact relative to this topic.

Projected Water Demand for the Proposed Project: Water would be delivered to the Project via the City's existing and planned distribution system. The Project will receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. According to the Water Supply Assessment prepared for the proposed Project, the proposed Project has an associated Land Use-based Water Demand Factor (WDF of 3.3 AFY/acre associated with Medium High Density Residential (MHDR) based on the City's UWMP. The projected water demand for the proposed Project is shown in Table 4.0-2, below. The total projected annual potable water demand for the Project is projected to be 255.8 AFY.

TABLE 4.0-2: PROJECTED WATER DEMAND FOR BUILDOUT OF THE PROPOSED PROJECT

LAND USE	*UNIT FACTOR*	*ACREAGE*	*WATER DEMAND (AFY)*
Medium High Density Residential (MHDR)	3.3	77.5	255.8
Total	**--**	**77.5**	**255.8**

NOTES: BASED ON LAND USE-BASED WATER DEMAND FACTOR (WDF) OF 0.7 AFY/ACRE. AFY = ACRE-FEET PER YEAR.

SOURCE: TRACT 6205, NORTHWEST SPHERE OF INFLUENCE EXPANSION AREA. WATER SUPPLY ASSESSMENT (PROVOST & PRITCHARD CONSULTING GROUP, 2022).

As shown in table 4.0-2, the total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year as shown in Table ES-3 of the 2020 UWMP. This indicates an ability of the City to serve this project in the interim while additional supplies are acquired to accommodate full build-out of the GP.

Projected Water Supply for the Proposed Project: Water demands for the proposed Project will be served using the City's existing and future portfolio of water supplies. The inclusion of existing and planned future supplies is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

The applicants for the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable water supplies to the Project site.

Determination of Water Supply Sufficiency Based on the Requirements of SB 610: Water Code section 10910 states:

10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

Pursuant to Water Code section 10910(c)(4) and based on the technical analyses described in the UWMP, the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project as shown in table 4.0-2, in addition to existing and planned future uses.

A comparison of the City's projected potable and raw water supplies and demands is shown in Table 4.0-3, below, for Normal, Single Dry, and Multiple Dry Years. Demand within the City's service area is not expected to exceed the City's supplies in any Normal year between 2020 and 2040. From this analysis, the City's water demands are not expected to exceed water supplies in Single Dry Years or Multiple Dry Years.

TABLE 4.0-3: SUMMARY OF POTABLE AND RAW WATER DEMAND VERSUS SUPPLY DURING HYDROLOGIC NORMAL, SINGLE DRY, AND MULTIPLE DRY YEARS

HYDROLOGIC CONDITION		SUPPLY AND DEMAND COMPARISON, AFY			
		2025	2030	2035	2040
NORMAL YEAR					
Available Potable and Raw Water Supply		50,739	58,937	65,034	74,650
Total Water Demand		39,737	42,824	46,422	52,598
Potential Surplus (Deficit)		11,002	16,113	18,612	22,052
Supply Shortfall, Percent of Demand		-	-	-	-
SINGLE DRY YEAR					
Available Potable and Raw Water Supply		37,839	43,587	47,233	53,109
Total Water Demand		34,272	37,359	40,957	47,133
Potential Surplus (Deficit)		3,567	6,228	6,276	5,976
Supply Shortfall, Percent of Demand		-	-	-	-
MULTIPLE DRY YEAR					
Multiple Dry Year 1	Available Potable and Raw Water Supply	46,784	54,607	60,330	68,999
	Total Water Demand	36,489	39,422	42,840	48,707
	Potential Surplus (Deficit)	10,294	15,185	17,489	20,292
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 2	Available Potable and Raw Water Supply	45,093	52,576	57,958	66,095
	Total Water Demand	34,183	36,962	40,200	45,758
	Potential Surplus (Deficit)	**10,910**	**15,614**	**17,758**	**20,337**
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 3	Available Potable and Raw Water Supply	41,895	48,310	52,625	59,717
	Total Water Demand	31,346	33,969	37,028	42,277
	Potential Surplus (Deficit)	10,550	14,341	15,597	17,440
	Supply Shortfall, Percent of Demand	-	-	-	-

Multiple Dry Year 4	Available Potable and Raw Water Supply	37,839	43,587	47,233	53,109
	Total Water Demand	28,005	30,474	33,353	38,293
	Potential Surplus (Deficit)	9,834	13,112	13,881	14,815
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 5	Available Potable and Raw Water Supply	49,743	57,992	64,141	73,716
	Total Water Demand	37,825	40,758	44,176	50,043
	Potential Surplus (Deficit)	11,918	17,235	19,965	23,674
	Supply Shortfall, Percent of Demand	-	-	-	-

SOURCE: PROVOST & PRITCHARD, 2021B.

CONCLUSION

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.24: Cumulative Impact on Stormwater Facilities (Less than Significant and Less than Cumulatively Considerable)

The proposed Project includes development of a new storm drainage system to serve the proposed uses as described above. The construction of the new on-site stormwater drainage facilities, which are associated with future buildout of the Development Area of the Project Site, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the stormwater system, and all construction activities within the Development Area, are addressed throughout this EIR. In some cases, the direct and indirect impacts are potentially significant and warrant mitigation measures, while in other cases there are significant and unavoidable impacts. The future storm drainage infrastructure would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant mitigation measures included in this EIR. All mitigation measures presented throughout this EIR will be implemented to reduce impacts to the extent practicable. There will not be any significant impacts beyond what is disclosed in the other chapters of this document. In addition to the other mitigation measures presented throughout this document, the following mitigation measure is intended to ensure that the drainage system is designed and constructed to meet the City's performance standards. The plan will include an engineered storm drainage plan that demonstrates attainment of pre-Project runoff requirements prior to discharge and describes the treatment controls used to reach attainment consistent with the City's performance standards. With implementation of Mitigation Measure 3.14-1, as provided in Section 3.14: Utilities of this EIR, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.25: Cumulative Impact on Solid Waste Facilities (Less than Significant and Less than Cumulatively Considerable)

As previously described, permitted maximum disposal at the Clovis Landfill (SWIS Number 10-AA-0004) is 2,000 tons per day. The total permitted capacity of the landfill is 7.8 million cubic yards, of which, 7.74 million cubic yards remain. This landfill has an expected cease operation date in the year 2047. Additionally, the American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. As noted previously, the vast majority of landfill disposed from the City of Clovis went to Clovis Landfill.

The City already utilizes the American Avenue Disposal Site, Avenal Regional Landfill, and Fairmead Solid Waste Disposal Site; in 2019 Clovis disposed of 11,586 tons to the American site, 358 tons to the Avenal site and 1,956 tons to the Fairmead site. (Cal Recycle, 2022C, D, E).

The Avenal Regional Landfill has the furthest operation date; the landfill is expected to operate until March of 2056. Avenal has a remaining capacity of 28,900,000 cubic yards, and has a current maximum permitted throughput of 6,000 tons per day.

New residential land uses in the Development Area of the Project site would increase the amount of solid waste generated by residents. The increase in growth and development as a result of the development of the proposed Project could result in an increase of solid waste to transfer stations and landfills, and could contribute to an increased demand for solid waste services throughout the City. Solid waste generated by the proposed Project was estimated based on CalRecycle generation rate estimates by use. Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[3]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a **less than significant** impact. Thus, impacts related to solid waste facilities would be a **less than cumulatively considerable contribution**.

Impact 4.26: Cumulative Impact from Electrical, or Telecommunications Facilities (Less than Significant and Less than Cumulatively Considerable)

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project

[3] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs/household/day. (CalRecycle, 2022A).

site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The potential environmental effects associated with construction and operation of the proposed Project, including the installation of the proposed electrical improvements in the roadway rights-of-way to serve the proposed development, are analyzed throughout this EIR under each environmental topical area. The proposed Project would not result in the relocation or construction of new or expanded electrical, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a **less than significant** impact. Thus, impacts related to solid waste facilities would be a **less than cumulatively considerable contribution**.

4.2 SIGNIFICANT IRREVERSIBLE EFFECTS

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action, should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Consumption of Nonrenewable Resources

Consumption of nonrenewable resources refers to the loss of physical features within the natural environment, including the conversion of agricultural lands, loss of access to mining reserves, and nonrenewable energy use. The Project site has nonrenewable resources, including biological resources and agricultural resources.

As discussed in Section 3.4, Biological Resources, all impacts would be less than significant or less than significant with implementation of mitigation measures. As a result, the proposed Project will minimize the potential for impacts to the nonrenewable resources on the Project site, including biological resources and water resources, to the greatest extent feasible. More detailed and focused discussions of potential impacts to these nonrenewable resources are contained throughout this Draft EIR.

Nonrenewable agricultural resources such as agricultural land, farmland, and agricultural soils, would be converted during the construction and operation of the Project. The City's General Plan includes a variety of policies that seek to conserve and protect agricultural resources. These include policies that encourage the development of vacant lands within City boundaries prior to conversion of agricultural lands and ensure that urban development near existing agricultural lands will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations. Nevertheless, as discussed in Section 3.2, Agricultural Resources, impacts related to the conversion of Important Farmland were evaluated using the LESA Model and determined to be less than significant.

Irretrievable Commitments/Irreversible Physical Changes

Development of the proposed Project would result in irretrievable commitments by introducing development onto the site which is presently undeveloped. The conversion of agricultural lands to urban uses would result in an irretrievable loss of agricultural land, wildlife habitat, and open space.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for development and infrastructure installation associated with development and operation of the proposed Project. Buildout of the Project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the Project. The introduction of new residential and park uses to the Project site will result in an increase energy demand associated with building operations, vehicle travel, equipment operation, and other activities. Fossil fuels are the principal source of energy and the Project will increase consumption of available supplies, including gasoline and diesel fuel. These energy resource demands relate to initial construction, operation, maintenance and the transport of people and goods to and from the Project site that would occur with development of the proposed Project.

Additionally, development will physically change the environment in terms of aesthetics, air emission, noise, traffic, open space, and natural resources. These physical changes are irreversible after development occurs.

MANDATORY FINDINGS OF SIGNIFICANCE

CEQA Guidelines Section 15065 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

potential environmental effects that are individually limited, but cumulatively considerable. As defined in CEQA Guidelines Section 15065(a)(3), 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." Cumulative impacts are addressed previously in Section 4.1 for each of the environmental topics.

CEQA Guidelines Section 15065(a)(1) 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 (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. These impacts are discussed below.

Additionally, as required by CEQA Guidelines Section 15065(a)(4), 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. These impacts are discussed below.

Substantial Adverse Effects on Fish, Wildlife, and Plant Species

Section 3.4 (Biological Resources) of this Draft EIR fully addresses any impacts that might relate 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 as a result of Project development. As described throughout the analysis in this Draft EIR, the proposed Project would not result in any significant impacts that would substantially reduce the habitat of 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 reduce the number or restrict the range of a rare or endangered plant or animal to the environment. As described in greater detail in Section 3.4 (Biological Resources), any potentially significant impacts related to plant and animal species would be reduced to a less than significant level through implementation of goals, policies and implementation measures provided in the City's General Plan as well as through adherence to state and federal regulations. Therefore, this is considered a **less than significant** impact.

4.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated, but not reduced to a level of insignificance. The following significant and unavoidable impacts of the proposed Project are discussed in Sections 3.1, 3.2, and 3.13, and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:

- Impact 3.13-1: Project development would not result in VMT increases that are greater than 87 percent of Baseline conditions;

- Impact 4.20: Under Cumulative conditions, Project development would result in VMT increases that are greater than 87 percent of Baseline conditions.

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5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined, but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

PROJECT OBJECTIVES

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities, and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice* to modestly increase urban density.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

ALTERNATIVES NOT SELECTED FOR FURTHER ANALYSIS

A Notice of Preparation (NOP) was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed Project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

The City of Clovis considered alternative locations early in the public scoping process. The City's key considerations in identifying an alternative location were as follows:

- Is there an alternative location where significant effects of the Project would be avoided or substantially lessened?
- Is there a site available within the City's Sphere of Influence with the appropriate size and characteristics such that it would meet the basic Project objectives?

The City's consideration of alternative locations for the Project included a review of previous land use planning and environmental documents in Clovis, including the General Plan. The search included a review of land in Clovis that is located within the Sphere of Influence, suitable for development, available for acquisition, and not already approved or pending development. It was found that there are numerous approved projects and proposed projects that are currently under review in Clovis. These approved and proposed projects are not available for acquisition by the Project applicant and are not considered a feasible alternative for the Project applicant. The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. For these reasons, the City of Clovis determined that there are no feasible alternative locations.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Four alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following four alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.

- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

INCREASED DENSITY MIXED USE ALTERNATIVE

Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 80 percent of the Development Area (62 acres) would be developed with 605 residential units (9.75 du/ac). This would still fall under the Medium-High Density (MH) 7.1–15.0 du/ac land use category. The remaining 15 acres of the Development Area would be developed with a mix of commercial and higher density residential. The mixed-use area would have 10 acres for High Density (H) 15.1–25.0 du/ac. The alternative assumes 195 apartments constructed at a density of 19.5 du/ac. There would also be 5 acres of Neighborhood Commercial (NC) (Max FAR 0.50). This area would be developed as a neighborhood-scale shopping facility. The FAR would allow for 108,000 square feet of commercial. It is anticipated that the commercial would include an anchor store such as a small supermarket with a wide range of ancillary uses including banks, restaurants, service businesses, and other related activities are generally found in these planned commercial centers.

REDUCED DENSITY ALTERNATIVE

Under this alternative, the proposed Project would have a reduced density in the Development Area that would fall under the Very Low Density (VL) 0.6–2.0 du/ac land use. The alternative assumes 150 residential units at approximately 2 du/ac. This use is described as large lot single-family residences and appurtenant structures within an identifiable residential neighborhood. This alternative would include neighborhood parks and all the infrastructure necessary to connect to City services.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Under this alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area. Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate that possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-1 summarizes the comparative effects of each alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Aesthetics and Visual Resources

The No Project (No Build) Alternative would leave the Project site in its existing state and would not result in increases in daytime glare or nighttime lighting. The visual character of the Project site would not change under this alternative compared to existing conditions.

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan, which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

Overall, the proposed Project would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. The No Project (No Build) Alternative would avoid these less than significant impacts altogether. As such, this impact would be reduced when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on agricultural land. As such, this impact would be reduced when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod™ (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project

would not have land uses that would generate a significant risk of public exposure to TACs.

Under the No Project (No Build) Alternative, the Project site would not be developed, and there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to air quality. As such, this impact would be reduced when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey that the agricultural disturbance on the Project site precludes the existence of special-status plants, unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the Project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, no habitat would be removed and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities, which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

The No Project (No Build) Alternative would result in no ground disturbing activities related to the proposed Project and would not have the potential to disturb or destroy cultural, historic, archaeological, or tribal resources. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the No Project (No Build) Alternative would result in less potential for impacts to cultural resources as the entire Project site would

continue to be vacant agricultural land. As such, this impact would be reduced when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion area, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[1] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[2], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the

[1] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[2] The amortization period used for this calculation is 30 years.

use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, and no construction or operational activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a

project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas, including paints, cleaners and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site, and the potential for hazardous material release on the Project site would be eliminated. As such, this impact would be reduced when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

*Groundwater Extraction***:** Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The

majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on hydrology and water quality. As such, this impact would be reduced when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent

with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site and the potential for land use conflicts would be eliminated. As such, this impact would be reduced when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a

temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact from noise. As such, this impact would be reduced when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which

would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site, and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on public services. As such, this impact would be reduced when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are

forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on traffic. As such, this impact would be reduced when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[3]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

[3] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on utilities. As such, this impact would be reduced when compared to the proposed Project.

INCREASED DENSITY MIXED USE ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in a different density and mix of land uses, but overall, it would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. As such, this impact would be largely equal when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed

Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation' established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same land conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod™ (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions generated compared to the

proposed Project. Emissions would be slightly greater. This impact would be slightly greater when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas

(i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same habitat conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development, and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.4-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential to disturb or destroy cultural, historic, archaeological, and tribal resources as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground

failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential for geologic hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[4] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[5], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for

[4] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[5] The amortization period used for this calculation is 30 years.

its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This increased density would result in greater operational emissions, and slightly more construction emissions when compared to the proposed Project.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions generated compared to the proposed Project. Emissions would be slightly greater. This impact would be slightly greater when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include

project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas, including paints, cleaners and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project

does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential for hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on

the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have

a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential for impacts to hydrology and water quality as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent

with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would not result in a conflict with land use, zoning, or policies. The increased density of residential uses, however, would be less compatible with the neighbors to the north compared to the proposed Project. As such, this impact would be greater when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered

significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different travel and use characteristics compared to the proposed Project. Noise generated by traffic would be slightly greater. Construction noise would largely be the same. As such, this impact would be slightly greater when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for public services compared to the proposed Project. Demand for services would be slightly greater. It is still anticipated that impact fees would be adequate to offset the financial impact on public service providers. Overall, this impact would be slightly greater when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because

the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different traffic generation, distribution, and VMT compared to the proposed Project. Traffic generation, distribution, and VMT would be slightly greater. It is still anticipated that installation of recommended improvements and payment of impact fees would be adequate to offset the level of services impacts, but VMT would be greater. Overall, this impact would be slightly greater when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[6]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within

[6] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for utility services compared to the proposed Project. Demand for utilities would be slightly greater. It is still anticipated all utility providers could serve this alternative; however, this impact would be slightly greater when compared to the proposed Project.

REDUCED DENSITY ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in a different density and mix of land uses, but overall, it would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. As such, this impact would be largely equal when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation' established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same land conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod™ (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the

proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions compared to the proposed Project. Emissions would be slightly less, as there would be fewer homes and residents. Overall, this impact would be slightly less when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late

July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same habitat conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development, and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential to disturb or destroy cultural, historic, archaeological, and tribal resources as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of

the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential for geologic hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[7] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[8], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

[7] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[8] The amortization period used for this calculation is 30 years.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This increased density would result in greater operational emissions, and slightly more construction emissions when compared to the proposed Project.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions compared to the proposed Project. Emissions would be slightly less, as there were be fewer homes and residents. Overall, this impact would be slightly less when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with

the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential for hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

*Groundwater Extraction***:** Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting

more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential for impacts to hydrology and water quality as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has

approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would not result in a conflict with land use, zoning, or policies. The reduced density of residential uses, however, would be more compatible with the neighbors to the north compared to the proposed Project. As such, this impact would be less when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway

must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly lower travel and use characteristics compared to the proposed Project. Noise generated by traffic would be slightly lower. Construction noise would largely be the same. As such, this impact would be slightly less when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of

existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for public services compared to the proposed Project. Demand for services would be slightly less, as there were be fewer homes and residents. It is still anticipated that impact fees would be adequate to offset the financial impact on public service providers. Overall, this impact would be slightly less when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However,

this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly less traffic generation, distribution, and VMT compared to the proposed Project. Traffic generation, distribution, and total VMT would be slightly less. It is still anticipated that installation of recommended improvements and payment of impact fees would be adequate to offset the level of services impacts. Total VMT would be less, but per capita VMT would be approximately the same. Overall, this impact would be slightly less when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included

in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[9]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for utility services compared to the proposed Project. Demand for utility services would be slightly less, as there would be fewer homes and residents. Overall, this impact would be slightly less when compared to the proposed Project.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the

[9] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has physically the same impacts. Overall, this alternative would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. As such, this impact would be largely equal when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation' established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. The elimination of the Non-Development Area from this alternative would have no physical benefits relative to this topic. This alternative would result in

the same land conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod™ (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

These impacts would be similar with the Reduced Sphere of Influence Alternative and has physically the same impacts. This would result in equal operational emissions, and equal construction emissions when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance

to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same habitat conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development, and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical

and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential to disturb or destroy cultural, historic, archaeological, and tribal resources as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they

would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential for geologic hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[10] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[11], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

[10] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[11] The amortization period used for this calculation is 30 years.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This increased density would result in greater operational emissions, and slightly more construction emissions when compared to the proposed Project.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area;

equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas, including paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential for hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions.

As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential for impacts to hydrology and water quality as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are

outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in

the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site, and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.
These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[12]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed Project.

As Table 5.0-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No

[12] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives.

TABLE 5.0-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (NO BUILD) ALTERNATIVE*	*INCREASED DENSITY MIXED USE ALTERNATIVE*	*REDUCED DENSITY ALTERNATIVE*	*REDUCED SPHERE OF INFLUENCE ALTERNATIVE*
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Equal (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT

LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT

EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

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