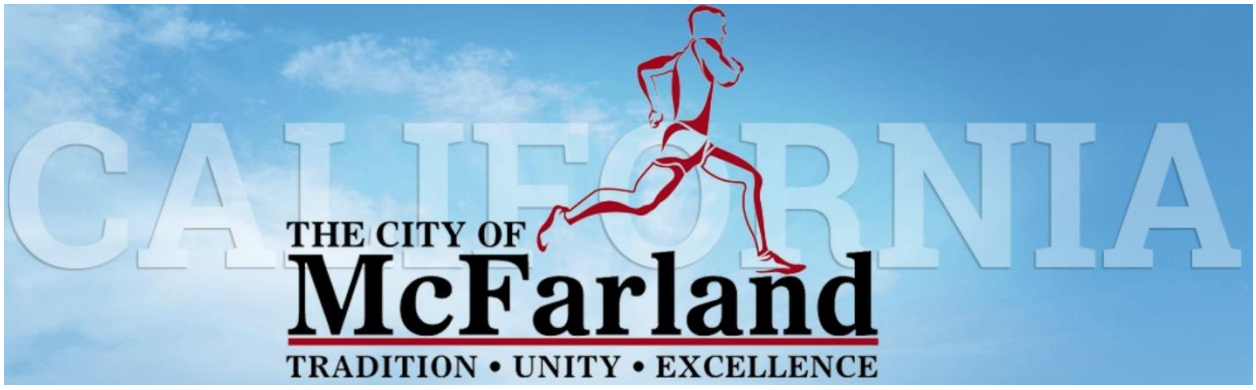

DRAFT ENVIRONMENTAL IMPACT REPORT
SCH # 2021040288

McFarland 2040 General Plan

Draft | May 16, 2021

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Draft Environmental Impact Report

For

Draft City of McFarland 2040 General Plan

State Clearinghouse Number: 2021040288

DATE:
May 16, 2021

Lead Agency:
City of McFarland

Consultants:
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City Council Members

Sally Gonzalez, *Mayor*

Maria T. Perez, *Mayor Pro-Tem*

Eric Rodriguez, *Councilmember*

Saul Ayon, *Councilmember*

Ricardo Cano, *Councilmember*

Planning Commission

Jose Hernandez, *Chairman*

Rudy Nuñez, *Vice Chairman*

Marco Martinez, *Commissioner*

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1. Executive Summary

This section provides an overview of the project, the City of McFarland 2040 General Plan (Plan), and the environmental analysis involved with the project. For detailed discussions of Plan impacts and listed mitigation measures related to the Plan, please refer to the specific environmental analysis sections contained in Chapter 4, sections 4.1 through 4.20 of this Environmental Impact Report (EIR).

1.1. Environmental Procedures

This document is a Program EIR which analyzes potential environmental impacts of the adoption of the proposed McFarland 2040 General Plan. The Program EIR is non-specific and does not evaluate the impacts of specific projects that may be used to implement the Plan. Specific projects will require separate assessment to determine any environmental impacts and to secure necessary development permits. While subsequent environmental review can be tiered off this EIR, the City of McFarland 2040 General Plan EIR does not intend to address impacts of individual projects. The scope of the EIR was established by the City of McFarland through the EIR scoping process.

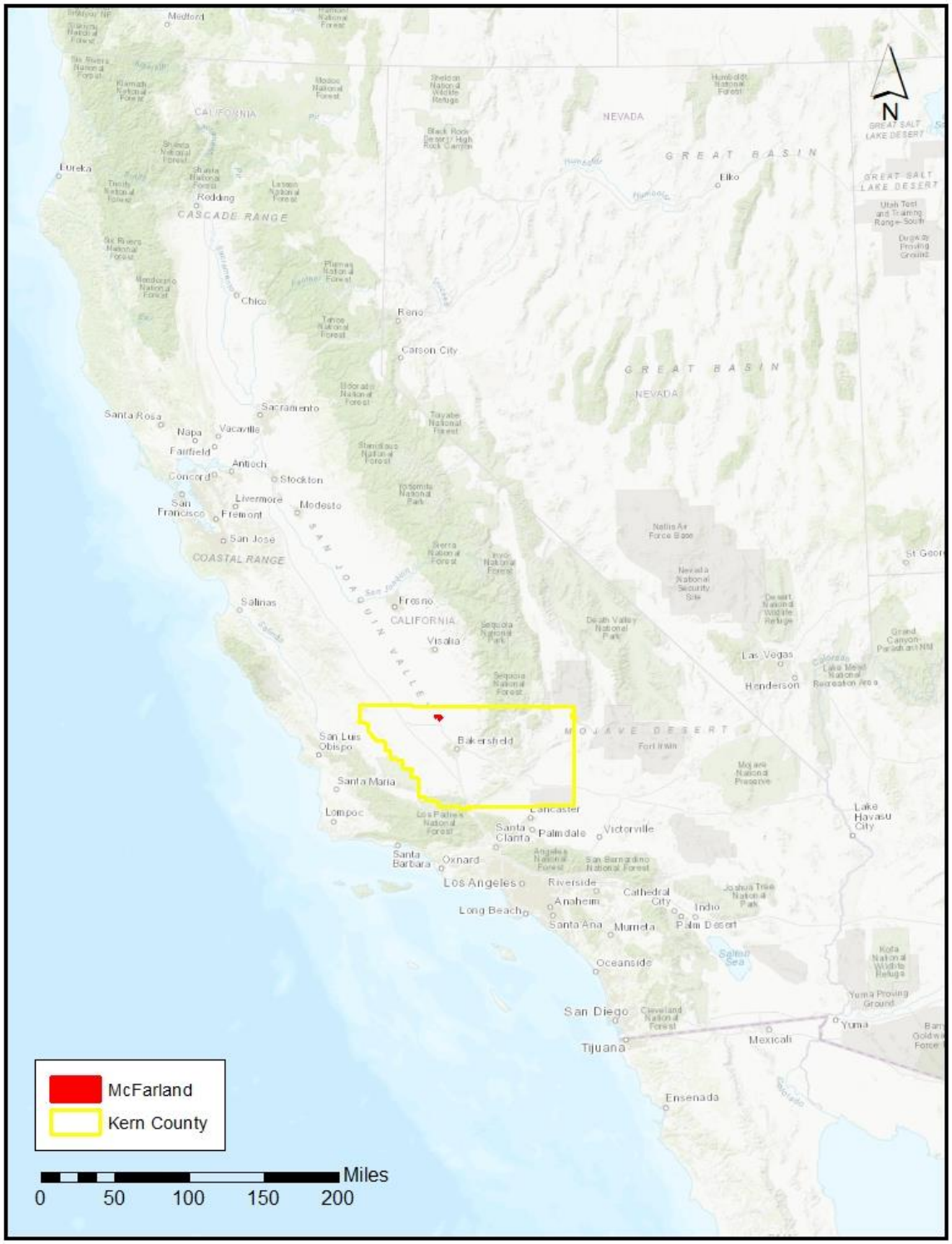
1.2. Location and Boundaries of the Plan Area

1.2.1. Plan Area Location

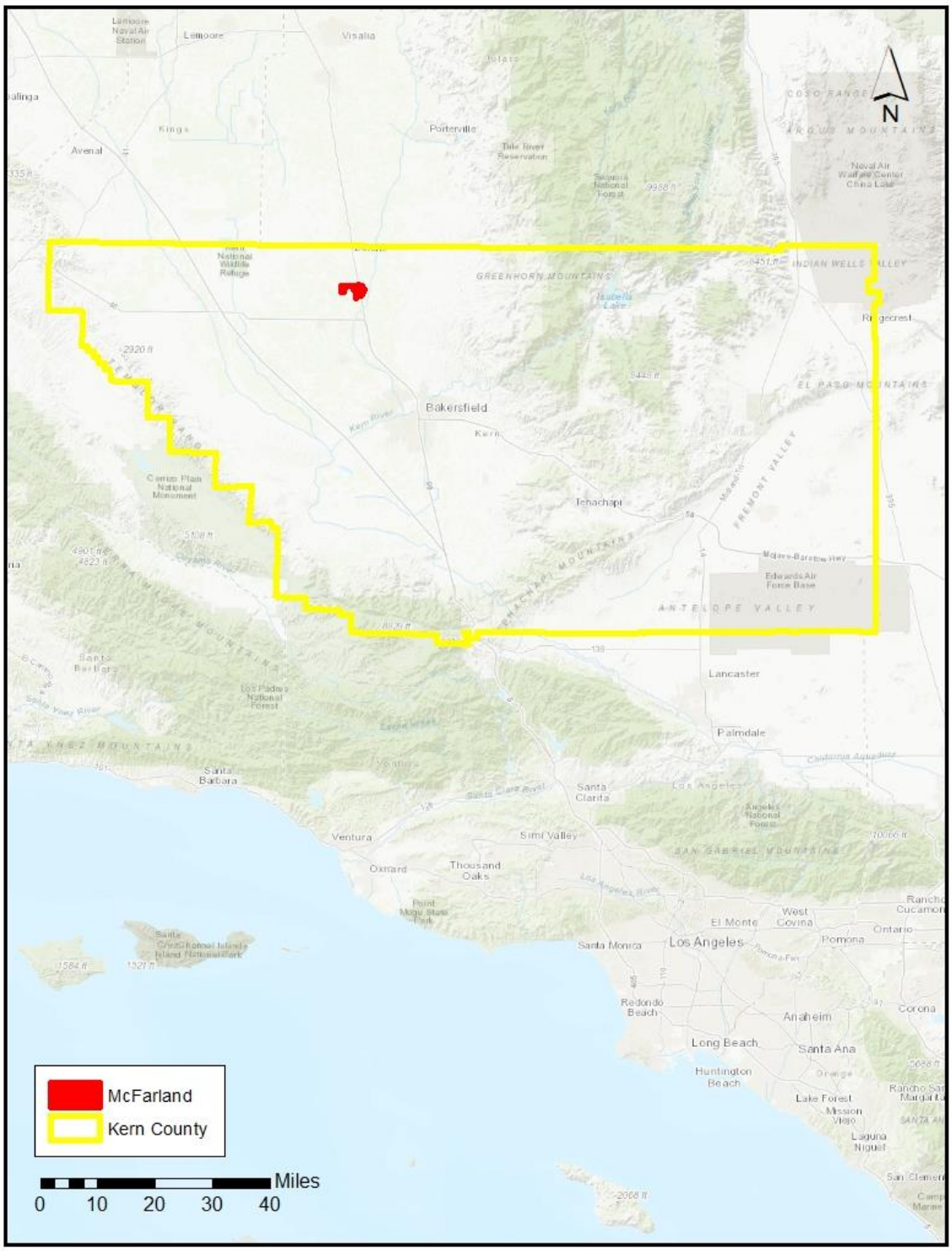
The City of McFarland sits in the northern section of Kern County within California's Central Valley. Map 1-1 displays the location of McFarland in relation to the State of California. Map 1-2 displays the location of McFarland within Kern County. The City is located along Highway 99, approximately 25 miles north of Bakersfield and approximately seven miles south of Delano. McFarland's boundaries encompass approximately three-square miles of land consisting of mostly residential, institutional, and agricultural uses. McFarland's Sphere of Influence and the surrounding area are primarily agricultural.

McFarland's climate consists of hot and dry summers and cool winters. Annual rainfall averages seven inches and average snowfall is zero inches. McFarland experiences sunny days for 274 days per year on average.

MAP 1-1: LOCATION OF MCFARLAND WITHIN THE STATE OF CALIFORNIA



MAP 1-2: LOCATION OF MCFARLAND WITHIN KERN COUNTY



1.2.2. Plan Area Boundaries

Prior to 2020, the planning area for the City of McFarland encompassed approximately 12.12 square miles (7,760 acres) south of the City of Delano and north of the City of Bakersfield. The area includes "east side" and "west side" neighborhoods on the two sides of the north-south Highway 99 and Union Pacific railroad rights-of-way. The Sphere of Influence (SOI) approved by the Local Area Formation Commission (LAFCO) is defined as the planning boundary outside of the City's legal boundary; the SOI designates McFarland's probable future boundary and service area. The planning area, to which this document refers, is a compilation from the boundaries of existing and potential future extents of the City and its SOI. The Plan details the future development of the City. The City's SOI is slated to be expanded after 2020 with inclusion of the land along Highway 99 south toward State Route 46 and the Famoso interchange. This proposed expanded Sphere of Influence is to encompass approximately 18.37 square miles (11,760 acres). Since a Sustainable Agriculture Element is included in this General Plan update and agricultural lands surround the City and its SOI, the "study area" extends slightly beyond the proposed SOI to cover an area of approximately 23 square miles or 14,760 acres.

1.3. Plan Summary

This project is a comprehensive update of the General Plan for the City of McFarland, California. State law requires cities and counties to prepare and adopt a General Plan to serve as a guiding document for land use and development decisions. The General Plan is developed with public input as well as demographic and planning research. It is typically prepared looking over a 15 to 20-year timeline, and must be periodically updated according to State law, with the Housing Element requiring more frequent updates.

The General Plan is separated into thematic elements. All elements must be consistent with each other. Seven elements are required for all General Plans in California, with two further elements required for communities meeting certain criteria that exist in McFarland. Optional elements may also be included; and they carry the same legal force and status as the required elements. This General Plan includes five optional elements. The fourteen elements include:

Required: Land Use, Circulation, Housing, Safety, Conservation, Open Space, and Noise

Required in San Joaquin Valley Air Pollution Control District: Air Quality

Required in Disadvantaged Communities: Environmental Justice

Optional: Economic Development, Health, Community Design, Public Facilities, and Sustainable Agriculture

1.4. Summary of Alternatives to the Proposed Plan

The Business-As-Usual Alternative is based on historic growth patterns and land use trends. The Business-As-Usual Alternative includes the expansion of the City and its Sphere of Influence (SOI) to the south with unrestricted conversion of agricultural land to various types of development. This alternative envisions primarily commercial and industrial development along Highway 99. Residential, institutional, and other development continues to the west and to the east of the Highway 99 corridor. Transportation systems remain automobile-oriented with some improvements for pedestrian connectivity and comfort. Extensive development, including residential development, would occur in 100-year and 500-year floodplains, presenting risks to life and property. Utilities must expand and improve to provide adequate capacity, especially wastewater and stormwater on the east side of the City.

The Moderate Growth and Redevelopment Alternative advocates focusing growth on underutilized and vacant parcels to concentrate growth within walkable, bikeable, or bus-ride distances to retail and services. This alternative identifies 5 areas of proposed growth:

Downtown Core
Mixed-use commercial and residential development close to shops, amenities, and public spaces.

North and West Neighborhoods
Commercial infill, high density housing, and improved connectivity to activity hubs in the City.

Southern Highway Commercial
New commercial area south of the City along Highway 99 to create opportunities for such businesses as grocery stores and retail centers that require large space.

East Neighborhood
Mixed-use office buildings along the highway corridor, accessory dwelling units (ADUs) throughout the neighborhood, and improved connectivity to the west side of the City.

The Moderate Growth and Redevelopment Alternative prioritizes mixed-use designations and infill development to create growth within the City while reducing sprawl and improving residential transport connectivity. This alternative also offers diverse transportation options that address walkability and bike-ability between neighborhoods of the City and the expansion of existing bus transit service.

The Smart Growth Alternative accounts for the most aggressive population growth for the City of McFarland, maximizing infill within the City and new development outside of the existing City boundary to accommodate the maximum population, housing, and job targets. This alternative identifies three key areas for growth of housing and jobs across the City:

Downtown Infill
The entire downtown core is to be designated for mixed-use development which would allow buildings to host commercial or office on the first floor and residential units on the upper floors. This increase in density has the potential to offer density bonus opportunities for affordable housing developers.

Westside Expansion
A range of low-to-high density residential developments to accommodate projected population growth. High-density residential development is proposed along Garzoli Avenue, the west end's main arterial roadway, while medium and low-density housing is proposed on slower moving residential streets.

Highway 99 Improvements
This area promotes highway-serving commercial uses such as gas stations and hotels, as well as industrial uses such as manufacturing along Highway 99.

The Smart Growth Alternative focuses its aggressive growth in three key areas to serve the needs of neighborhoods, the region, and travelers on Highway 99. To avoid locating new residential development in hazard areas, the Smart Growth Alternative increases the density of housing typologies, particularly in the Downtown Infill and Westside expansion key growth areas. Additionally, new mixed-use and commercial development are prioritized in the Downtown Infill to support a vibrant downtown core and at key intersections within the Westside Expansion key growth area (Garzoli Avenue at Perkins, Sherwood, and Taylor Avenues). It also prioritizes commercial development along Highway 99 to encourage highway travelers to stop for services in McFarland.

The Preferred Growth Alternative is the vision for development changes in McFarland by the year 2040. This alternative includes a combination of the community's preferred concepts, derived from the previous three alternatives. The Preferred Growth Alternative influences future land use designations, housing allocation, and circulation improvements needed to meet the population growth projections and targets for job growth.

The main features of this alternative include medium and high density mixed-use downtown and along major arterials west of downtown as well as the establishment of neighborhood retail centers. This provides the opportunity to integrate housing and commercial uses, making services readily accessible to large segments of the population. In addition to mixed use commercial, this alternative includes commercial uses along Highway 99 to cater for pass-through traffic and industrial uses to the south to boost the availability of jobs. The Preferred Alternative therefore includes the following variety of changes to land use:

- Infill development for housing and commercial growth on the west side of the City.
- A neighborhood commercial corridor along Kern Avenue to serve the east side of the City.
- Downtown mixed-use redevelopment to create a vibrant atmosphere in the center of the City.
- Commercial and industrial development along Highway 99.
- Additional Accessory Dwelling Units in the Central McFarland neighborhoods.

Circulation for this alternative, includes a network of complete streets, a pedestrian and bike network, new transit stops for internal transit service and at major commercial centers along Highway 99, and safer pedestrian crossings between the east and west sides of the City. These new circulation connections are to expand multi-modal transportation throughout the City.

The Plan concentrates development in key growth areas to target McFarland's most optimal locations for development: Downtown, Western McFarland, and the Highway 99 Corridor. Growth areas are designed to accommodate maximum growth while aligning with McFarland's desires to remain an agriculture-based City. Even with the many changes, McFarland's small-town community character is envisioned to remain. The full description of the Preferred Growth Alternative (Chapter 5 of the General Plan) includes the identification of further implications for each of the General Plan elements.

1.5. Issues to be Resolved

Section §15123(b) (3) of the 2016 CEQA Guidelines requires that an EIR identify issues to be resolved. This includes the choice among alternatives and whether or how to mitigate significant effects. Regarding the proposed Plan, major issues to be resolved are outlined below and include decisions by the City of McFarland, as lead agency, on this EIR. Issues relate to the following:

- Whether this EIR adequately describes the environmental impacts of the proposed McFarland 2040 General Plan.
- Whether the benefits of the Plan override those environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance
- Whether the proposed land use changes are compatible with the character of the existing area
- Whether the identified goals, policies or mitigation measures should be adopted or modified
- Whether there are other mitigation measures that should be applied to the Plan besides those Mitigation Measures identified in the EIR
- Whether there are any alternatives to the Plan that would substantially lessen any of the significant impacts of the proposed Plan and achieve most of the basic objectives.

1.6. Areas of Controversy

The City of McFarland issued a Notice of Preparation (NOP) of an EIR on November 16, 2020 and again on March 4, 2021 (*due to uncertainty with transmissions of communications during a pandemic, lockdowns, and remote work conditions*). The State Clearinghouse posted the NOP officially at the CEQA.net site on April 12, 2021 to conform with its transition to electronic noticing. The scoping period ran from November 16, 2020 until May 12, 2021, during which members of the public and responsible agencies were invited to submit comments related to the content and scope of the EIR for the McFarland 2040 General Plan. Additional comments were received during the General Plan outreach phase. These NOP comments are summarized below, followed by input from the General Plan community meetings as main areas of controversy and concern for the project.

1.6.1. Notice of Preparation Comments:

1.6.1.1. Native American Heritage Commission

During the NOP period, the project team received comments from the Native American Heritage Commission (NAHC). Appendix to Section 1.6 contains the full letter. The following subsections identify the key issues and remedies.

1. [NAHC pg. 1, paragraph 3 to pg. 2, paragraph 1] The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. This invitation for consultation is mandatory under Assembly Bill 52 (AB 52) and is required to be sent out 14 days before completion of an application. The tribes should be provided a 30-day window to respond.

   The City of McFarland sent out an invitation for consultation letter to 19 tribes historically or culturally associated with the geographic area on December 14, 2020. The letter can be found in the Appendix to section 1.6 of the EIR. Those tribes that responded indicated the project area was outside ancestral lands and thus needed no consultation.

2. [NAHC pg. 2, paragraph 2] The Native American Heritage Commission (the Commission) also advises that under AB 52, a lead agency should begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.

   There were no requests for consultation for the McFarland 2040 General Plan update as indicated in response to NAHC 1.

3. [NAHC pg. 2, paragraphs 3 & 4] The Commission provides the following required topics of consultation if a tribe requests to discuss them including: alternatives to the project, recommended mitigation measures, and significant effects. Additionally, the Commission also encloses the following discretionary topics for consultation: type of environmental review necessary, significance of the tribal cultural resources, significance of the project's impacts on tribal cultural resources, and if necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.

   There were no requests for consultation for the McFarland 2040 General Plan update as indicated in response to NAHC 1.

4. [NAHC pg. 2, paragraph 5] Government Codes §6254 (r) and §6254.10 dictate that with some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process cannot be included in the EIR. Instead, information submitted by a California

Native American tribe during the consultation or environmental review process shall be published in a confidential appendix unless otherwise stated.

No information from any California Native American Tribe has been submitted to the City during this environmental review process.

5. [NAHC pg. 2, paragraph 6] The NAHC advises that per AB 52, if a project has a significant impact on a tribal cultural resource, the City's EIR should include discussion of the impacts.

   No tribes requested consultation in regard to this project nor did any tribe expose any possible impacts that this Plan may have on a tribal cultural resource.

6. [NAHC pg. 3, paragraph 1] The Commission lays out how to determine the conclusion of a consultation following AB 52.

   However, no tribes requested consultation for the McFarland 2040 General Plan update.

7. [NAHC pg. 3, paragraph 2] Pursuant to Public Resources Code §21080.3.2, any mitigation measures agreed upon in the consultation should be recommended for inclusion in the EIR.

   No tribes requested consultation for the McFarland 2040 General Plan update, nevertheless, the Plan (and Section 4.5.3 of the EIR) include the following mitigation policies:

   Policy OS 2.1.1: Protect and maintain the City's historic cultural resources.

   Program OS 2.1.1.1: Include Native American Tribal Authorities in environmental review processes.

   Program OS 2.1.1.2: Provide confidential review and protection for cultural heritage resources if present or found during development.

   Policy OS 2.1.3: Foster an appreciation of diverse cultural identities through geographic and historical context.

   Program OS 2.1.3.1: Establish a system of signage that promotes and provides historical context for open space resources.

   Program OS 2.1.3.2: Promote the McFarland historical society.

   Furthermore, the EIR on the 2040 McFarland General Plan has the following mitigations:

   MITIGATION CULT-2A

   The City of McFarland shall implement the following policy:

   In the event that archeological or paleontological resource is unearthed or otherwise discovered during construction related activities associated with the proposed Plan, all work must be suspended until a qualified archeologist is consulted.

MITIGATION CULT 4A:

The City of McFarland will implement the following policy in accordance with California Public Resources Code Chapter 1.75 Section 5097.9 – 5097.991 and Section 7050 of the Health and Safety Code:

In the event human remains are discovered during the build-out of the Plan's proposed developments, construction must be stopped, and a qualified coroner must be contacted to determine if the remains are of Native American origin. If the coroner makes this determination, the coroner should contact the Native American Heritage Commission within 24 hours.

8. [NAHC pg. 3, paragraphs 3 & 4] The Commission recommends that if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, even if no consultations occur, the City shall consider feasible mitigation.

   No evidence has been found to demonstrate that the Plan will cause a significant effect to a tribal resource, nevertheless, the Plan (and Section 4.5.3 of the EIR) include mitigation policies and measures identified in the response to NAHC 7.

9. [NAHC pg. 3, paragraph 5] The Commission explains that EIR reports cannot be certified and a negative declaration or mitigated negative declaration cannot be adopted unless one of the following occurred:
   a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
   b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
   c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

   By April 14, 2021, 120 days after the invitation for consultation was sent out, no tribes had requested consultation, therefore the EIR meets the requirements under this section.

10. [NAHC pg. 4, paragraph 2] The Commission advises that under Senate Bill 18 (SB 18) when adopting or updating a General Plan, the City of McFarland is required to contact the appropriate tribes identified by the NAHC. The tribes have 90 days to respond and, if a tribe, once contacted, requests consultation the City must consult with the tribe on the plan proposal.

    The City requested a “Tribal Consultation List” and sent out an invitation for consultation to all 19 tribes on the list. The invitation and consultation list are included in the Appendix to section 1.6 of the EIR.

11. [NAHC pg. 4, paragraphs 3, 4, & 5] The Commission recommends that per SB 18, the City shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places during a consultation. There is no statutory time limit on SB 18 tribal consultation. Additionally, the NAHC includes the condition under which a consultation is considered concluded.

    There were no request for consultation for the McFarland 2040 General Plan update.

12. [NAHC pg. 4, paragraph 6] The NAHC urges the City to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC.

    The Native American Heritage Commission (NAHC) provided a "Tribal Consultation List" in December 2020. Appendix to section 1.6 of the EIR includes the consultation list.

    The Native American Heritage Commission (NAHC) conducted a "Sacred Lands File" search in December 2020 for archaeological resources and concluded as follows:

    > "The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.".

13. [NAHC pg. 4, paragraph 8] The Commission recommends that the City contact the appropriate regional California Historical Research Information System (CHRIS) Center for an archaeological records search.

    A recent CHRIS search conducted for the City of McFarland 2016 General Plan EIR found the following:

    > It "identified 14 previously conducted studies and 14 cultural resources within the project site and 200-foot buffer. All of the cultural resources are built environment and were constructed during the 20th century. One resource, the Friant-Kern Canal is determined as eligible for the California Register of Historical Resources (CRHR) and National Register of Historic Places NRHP." (City of McFarland. 2016. General Plan Amendment Environmental Impact Report)

14. [NAHC pg. 4, paragraph 9] The NAHC recommends the City to prepare a professional report detailing the findings and recommendations of the records search and field survey should an archaeological inventory survey be required.

    No such survey was required for this Plan and no report was prepared.

15. [NAHC pg. 5, paragraph 1] The Commission recommends that the City of McFarland contact the NAHC for a Sacred Lands File search and a Native American Tribal Consultation List of appropriate tribes for consultation.

    The NAHC conducted a Sacred Lands File search and provided a Native American Tribal Consultation List in early December 2020. Response to NAHC 12 includes additional details.

16. [NAHC pg. 5, paragraph 2] The Commission explains that lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence. Therefore, the EIR should include provisions for the identification and evaluation of inadvertently discovered archaeological resources, provision for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans, and provisions for the treatment and disposition of inadvertently discovered Native American human remains.

    Policies in the Plan (and Section 4.5.3 of the EIR) include mitigation policies and measures identified in the response to NAHC 7 that address these recommendations.

1.6.1.2. California Department of Conservation (DCON)

During the NOP period, the project team received comments from the Division of Land Resource Protection of the California Department of Conservation (DCON). Appendix to Section 1.6 contains the full letter. The following subsections identify the key issues and remedies.

1. [DCON pg. 1, paragraph 3] The Department recognizes the Plan's guidance in balancing the trade-off between housing choices, economic growth, and protection of the natural environment. The following are some of the General Plan policies the Department acknowledges:

    Policy LU 1.1.1: Expand the range of allowable housing types and areas in which they may be built.
    Policy LU 1.3.1: Develop compatible industrial, commercial, and other uses along Highway 99.
    Policy LU 1.4.1: Preserve open space in new residential developments.
    Policy LU 2.1.3: Focus future commercial development in existing commercial corridors.
    Policy LU 3.1.1: Reduce conflicts between incompatible land uses.
    Policy ED 1.1.1: Balance industrial, commercial, agricultural, and residential needs.
    Policy ED 2.1.1: Use the 2nd Street corridor as catalyst for downtown improvement.
    Policy ED 3.2.2: Facilitate strategic placement of businesses.
    Policy OS 2.1.2: Promote the use of open space for cultural and community enrichment.
    Policy AG 1.2.1: Encourage economically sound development of natural resources.
    Policy AG 2.1.1: Assess potential impacts of development on agricultural lands.
    Policy AG 3.1.4: Protect open space wherever possible.

2. [DCON pg. 2, paragraph 1] The Plan acknowledges the fact that the loss of agriculture land as a result of urban development represents a major loss in the State's agriculture resources and *encourages the protection and preservation of agricultural lands* through its goals, objectives, and policies. The Department also urges the City to implement an Agricultural Mitigation Program to *show commitment to the protection of agricultural lands*. The following are some of the General Plan policies that encourage the protection and preservation of agricultural lands as well as show commitment to the protection of agricultural lands:

    Objective AG 1.1: Protect prime farmland from non-agricultural development

Policy AG 1.1.1: Give priority to agricultural uses in agricultural areas.

Program AG 1.1.1.1: Maintain up to date mapping of lands within the City's Sphere of Influence under Williamson Act Contracts.

Program AG 1.1.1.2: Prohibit annexation of properties under Williamson Act contracts unless a Notice of Non-renewal has been filed.

Program AG 1.1.1.3: Adopt a Right-to-Farm ordinance.

Policy AG 1.2.1: Encourage economically sound development of natural resources.

Program AG 1.2.1.1: Protect open space through Williamson Act and conservation easements, prioritizing areas for continued production by 2025, and committing to easements by 2030.

Policy AG 2.1.1: Assess potential impacts of development on agricultural lands.

Program AG 2.1.1.1: Evaluate project impacts on neighboring agricultural lands when approving new developments

Program AG 2.1.1.2: Evaluate Williamson Act contracts within and near City limits and evaluate alternative soil conservation land uses on Prime Farmlands.

Program AG 2.1.1.3: Prioritize the procurement of non-Williamson Act agricultural lands for annexation.

Policy AG 3.1.4: Protect open space wherever possible.

Program AG 3.1.4.1: Preserve open space in agricultural production and conservation easements where possible.

Program AG 3.1.4.2: Encourage preservation of open space through Williamson Act or other tax-based incentive programs designed to reduce property tax burden on productive farmers.

Program AG 3.1.4.3: Encourage adoption of open space easements to reduce risk and provide a public benefit where safety concerns such as floodable area and pipeline and transmission lines are present.

Policy AG 6.2.1: Minimize the influence of speculative land transactions on the price of farmland

Program AG 6.2.1.1: Use voluntary purchase or voluntary transfer of development rights programs to limit intrusion of residential development into agricultural lands.

Program AG 6.2.1.2: Support maintaining the maximum amount of land in parcel sizes that farmers are willing to lease or buy for agricultural purposes.

Policy AG 6.2.2: Minimize the impact of residential parcels on adjacent agricultural operations

Program AG 6.2.2.1: Cluster development parcels to locate lots close to existing residences

Program AG 6.2.2.2: Use natural features such as ridge tops, creeks, and groves of trees to separate parcels from the farming areas wherever practical in areas where clustered subdivision is permitted.

Program AG 6.2.2.3: Place agricultural easements on residual farming parcels at the time that subdivisions are developed where clustered subdivision is permitted to the extent allowed by law.

Program AG 6.2.2.4: Add regulations to the development code to restrict the size and extent of non-agricultural development on agricultural lands.

Policy AG 7.1.1: Assure that the primary use of any parcel within the agricultural land use category is agricultural production and related processing, support services, and visitor-serving uses.

1.6.1.3. Southern San Joaquin Municipal Utility District (SSJMUD)

During the NOP period, the project team received comments from Southern San Joaquin Municipal Utility District (SSJMUD). Appendix to Section 1.6 contains the full letter. The following subsections identify the key issues and remedies.

SSJMUD Comments on the Draft General Plan:

1. [SSJMUD pg. 1, paragraph 3] SSJMUD acknowledges that the City has added Program SAF 2.4.1.4 to "enact new measures as needed according to protocols established by the Kern Water Authority. SSJMUD further asserts that KGA's member agencies (which include SSJMUD) are responsible for SGMA implementation within their respective Management Areas. SSJMUD contends that the General Plan Update has not made specific mention of the SSJMUD Management Area Plan or the KGA GSP.

   Volume 1 of the General Plan entitled "Background Report", documents existing settings, regulatory framework, and recommendations from appropriate references. Volume 1 has several references to the KGA GSP. The policy document (or General Plan) only has one specific reference to the KGA GSP as follows:

   > **Program SAF 2.4.1.4:** Enact new measures as needed according to protocols established by the Kern Groundwater Authority. (pg. 126)

   Consequent to this comment from SSJMUD, Volume 1 now has additional references to the SSJMUD Management Area Plan as section 17.2.6, which states the following:

   17.2.6 Southern San Joaquin Municipal Utility District (SSJMUD) Management Area Plan

   The Management Area Plan outlines the SSJMUD's (the District) efforts to comply with California state regulated Sustainable Groundwater Management Act (SGMA) of 2014 which requires groundwater basins to achieve a balanced average inflow and outflow of water. Groundwater is used in this region to support agricultural production and industrial practices that support the economic viability of local communities. The District's goal to balance in and outflows, as outlined in this plan, is expected to prevent the lowering of average groundwater levels beyond 2040 as well as avoid water quality degradation and land subsidence. The management area plan includes a detailed overview of the Districts' historical, current, and projected groundwater conditions, including groundwater storage, water quality, and land subsidence.

   Similarly, policies are modified or new policies are added to Volume 2 as follows:

   > **Policy SAF 2.4.3:** Identify groundwater recharge locations where soil and geography allow for infiltration.

Program SAF 2.4.3.3: Identify and evaluate potential land holdings to be purchased and used as spreading ponds

Program CON 2.1.2.3: Prepare an urban water management plan (UWMP) as population grows and the City's service area expands to comply with SB 7X-7 (Water Conservation Act of 2009). Develop the plan to decrease water use in public landscapes by 25% of 2018 levels by 2035. Convert existing landscapes to drip systems and replace landscapes requiring significant irrigation with drought tolerant vegetation.

Program PF 1.1.1.1: Continue monitoring water quality in accordance with SSJMUD monitoring standards and publish results as available.

Objective AG 2.4: Achieve groundwater sustainability by 2040

Policy AG 2.4.1: Collaborate and maintain consistency with SSJMUD Management Area Plan

Program AG 2.4.1.1: Encourage participation in SSJMUD In-Lieu Recharge Incentive Program.

Program AG 2.4.1.2: Encourage improvements to individual farming operations that address water use efficiency through SSJMUD On-Farm Efficiency Incentive Program

Program AG 2.4.1.3: Encourage improvements to individual farming operations that address groundwater protection and recharge through SSJMUD On-Farm Recharge Activities Incentive Program.

Program AG 2.4.1.4: Prioritize conversion of lands with lower agricultural potential and non-Williamson Act contract lands from agricultural use to urban use as necessary to accommodate growth.

Program AG 2.4.1.5: Encourage participation in SSJMUD in-District Allocation Structure, which would allow for the transfer of groundwater pumping credits within the District.

Program AG 2.4.1.6: Support SSJMUD to develop and implement a voluntary land fallowing program during droughts when the District may not be able to meet in-District demand from increases in the volume of imported water.

Program AG 2.4.1.7: Support SSJMUD in imposing restrictions that limit groundwater pumping when the District or the entire Subbasin are nearing a condition where they are unable to meet sustainable management criteria even with the implementation of the projects and management actions in the SSJMUD Management Area Plan.

Program AG 3.1.1.1: Encourage water-saving measures in farming through user education in McFarland and its sphere of influence to reduce water use and maintain groundwater levels.

2. [SSJMUD pg. 2, paragraph 1] SSJMUD encourages participation in monitoring localized impacts as outlined in the KGA GSP and the SSJMUD Management Area Plan to avoid violating SGMA. The following are some of the General Plan policies that encourage participation in monitoring localized impacts:

Policy PF 1.1.1: Protect water quality.

Program PF 1.1.1.1: Continue monitoring water quality and publish results as available.

Program PF 1.1.1.2: Continue to monitor the condition of pipes and general infrastructure for water distribution (pg. 151)

3. [SSJMUD pg. 2, paragraph 2] SSJMUD acknowledges that the General Plan has also included Policy SAF 2.4.3 which states that the City will "identify groundwater recharge locations where soil and geography allow for infiltration" (Policy SAF 2.4.3) but notes that the policy raises the question of where the City will obtain supplies for its proposed recharge activities and how the City plans to deliver water to these proposed facilities. Policy SAF 2.4.3 states the following:

> **Policy SAF 2.4.3:** Identify groundwater recharge locations where soil and geography allow for infiltration. (pg. 126)

Additional policy is added to address SSJMUD concern as follows:

> **Program PF 1.2.2.4:** Direct treated wastewater from expanded sewer facilities to designated areas for groundwater recharge. (pg. 153)

4. [SSJMUD pg. 2, paragraph 3] The District supports Program PF 1.2.2.2 (expand sewer facilities in eastern McFarland) as it would result in protection of groundwater quality and provide a source of beneficially reusable water, which says the following:

> **Program PF 1.2.2.2:** Expand sewer facilities in Eastern McFarland, including the construction of a new wastewater treatment plant. (pg. 152)

Additional policy language is added as follows:

> **Program PF 1.2.2.4:** Direct treated wastewater from expanded sewer facilities to designated areas for groundwater recharge. (pg. 153)

SSJMUD Comments on the Sustainable Agriculture Element:

5. [SSJMUD pg. 2, paragraph 6] SSJMUD notes that the Sustainable Agriculture element of the Plan does not consider the conversion of uncultivated or fallowed land into permanent groundwater recharge which would assist in reducing water demand and in providing locations for permanent groundwater recharge activities to augment groundwater supply.

Additional policy is added as follows:

> **Program PF 1.2.2.3:** Designate uncultivated or fallowed land into temporary and permanent areas for groundwater recharge. (pg. 153)

6. [SSJMUD pg. 3, paragraph 3] The District recommends the use of the SSJMUD Management Area Plan and KGA GSP as a starting point for discussing and developing the drought readiness measures promoted in Program AG 3.1.2.2, which states the following:

> **Program AG 3.1.2.2:** Cooperate with agricultural industry stakeholders in the City and its Sphere of Influence to promote drought readiness measures. (pg. 157)

Additional policy is added to address SSJMUD recommendations as Program AG 2.4.1.6 which states:

Program AG 2.4.1.6: Support SSJMUD to develop and implement a voluntary land fallowing program during droughts when the District may not be able to meet in-District demand from increases in the volume of imported water.

7. [SSJMUD pg. 3, paragraph 4] The District is supportive of the continued beneficial reuse of treated water from the wastewater treatment plant (WWTP) for irrigation and encourages the expansion of the use of recycled water as additional WWTP effluent becomes available as outlined in Objective AG 10.3, which states the following:

   Objective AG 10.3: Encourage the use of recycled water (pg. 163)

1.6.1.4. Department of Toxic Substances Control (DTSC)

During the NOP period, the project team received comments from Department of Toxic Substances Control (DTSC). Appendix to Section 1.6 contains the full letter. The following subsections identify the key issues and remedies.

17. [DTSC pg. 1, paragraph 3] The Department of Toxic Substances Control (the Department) recommends that the EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site. The EIR should identify the responsible agencies and mechanisms to instigate an investigation into the nature and extent of any contamination occurrences, and the potential threat to public health and/or the environment. The EIR addresses this recommendation in Section 4.8.3 as follows:

    HAZ – 2: Build-out of the proposed Plan will create a less-than-significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

    Proposed industrial and commercial land uses in the Plan have the potential to create a significant hazard in upset or accident conditions if they involve the use, production, or transport of hazardous materials; however, all subsequent projects of the proposed Plan will require CEQA review and mitigation of impacts associated with hazardous materials. Furthermore, in the case that the release of hazardous materials occurs, the City should collaborate with the County, following protocol from the County's Hazardous Materials Area Plan to carry out a study to evaluate the nature and extent of the contamination, and the potential threat to public health and/or the environment. The proposed Plan also includes additional policies and programs addressing hazardous materials sites that this draft EIR notes in Section 4.8.3.

18. [DTSC pg. 2, paragraph 1] The Department warns of the potential for aerially deposited lead (ADL) contamination of soils along major roadways as a result of the historical practice of adding lead compounds to gasoline. The following programs are included in the General Plan which address this concern:

Program SAF 3.1.2.2: When approving new development, encourage the preparation of a report certifying that the site has been surveyed for hazardous contaminants and has been appropriately remediated for the future proposed use.
Program SAF 3.1.6.4: Encourage developers to investigate development sites to identify hazardous materials.

In addition, section 4.8.3 of this draft EIR include such explanations as the following:

HAZ – 4: Build-out of the proposed plan will create a less-than-significant hazard to the public or the environment as a result of development on a site which is included on a list of hazardous materials sites compiled pursuant to government code section 65962.5.

According to an EnviroStor search conducted in 2019, there were three DTSC cleanup sites within City limits and one cleanup site within the planned annexation south of McFarland. The proposed Plan will not change the existing land uses on the contamination sites without mitigation. Additionally, there is a potential for aerially deposited lead (ADL) soil contamination along highway 99. Projects associated with development along highway 99 should include soil sampling to test for ADL. All subsequent projects of the proposed Plan will require CEQA review and mitigation of impacts associated with hazardous materials. The proposed Plan also includes additional policies and programs addressing hazardous materials sites that this draft EIR notes in Section 4.8.3.

19. [DTSC pg. 2, paragraph 2] DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine-waste. The City has restrictions in its municipal code that do not allow mining operations within McFarland and is not aware of any former mining sites within the project site.

20. [DTSC pg. 2, paragraph 3] The Department cautions that demolitions could risk exposure to hazardous materials including lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. DTSC advises the City to survey sites for the presence of such materials prior to demolition and to practice proper removal, demolition, and disposal of the above-mentioned chemicals.

Additional policies are added to the Plan to address demolition of existing structures as follows:

Policy SAF 3.1.7: Control pollution from hazardous materials.

Program SAF 3.1.7.1: Institute permitting system for demolition activities.
Program SAF 3.1.7.2: Establish a site inspection process to oversee safe demolition of existing structures.

Additionally, the General Plan includes the following programs that address the surveying and disposal of hazardous materials:

Program SAF 3.1.2.2: When approving new development, encourage the preparation of a report certifying that the site has been surveyed for hazardous contaminants and has been appropriately remediated for the future proposed use.
Program SAF 3.1.6.4: Encourage developers to investigate development sites to identify hazardous materials.
Program SAF 3.1.6.5: Encourage developers to safely transport and dispose of hazardous materials.

21. [DTSC pg. 1, paragraph 4] The Department suggests that any projects under the Plan which require the importation of soil to backfill any excavated areas should undergo proper sampling to ensure that the imported soil is free of contamination. All projects under the proposed Plan will require CEQA review and mitigation of impacts including soil backfill. To further address this concern, the following additional policy is added to the Plan:

Program SAF 3.1.7.3: Evaluate imported soils to ensure that they are free of contamination by hazard materials.

22. [DTSC pg. 2, paragraph 5] The Department advises that the EIR discuss the proper evaluation of sites used for agricultural, weed abatement, or related activities for organochlorinated pesticides. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 Interim Guidance for Sampling Agricultural Properties (Third Revision).

The following are related policies and programs in the Plan that mitigate the exposure to pesticides:

CON 3.2.3: Update current public maintenance plans to pesticide free maintenance strategies where feasible.

Program CON 3.2.3.1: Eliminate the use of neonicotinoid insecticides and other highly toxic systemic insecticides.

Program CON 3.2.3.2: Restrict the purchase and use of products that contain neonicotinoids and seeds or plants that have been treated with neonicotinoids.

Program CON 3.2.3.3: Eliminate cosmetic pesticide applications

Policy SAF 3.1.5: Minimize exposure to pesticides.

Program SAF 3.1.5.3: Coordinate with County departments to monitor pesticide storage, application, and exposure.

Policy AG 4.1.1: Limit and manage use of pesticides

Program AG 4.3.1.4: Encourage the education of farmers on integrated pest management to keep pests under control while minimizing use of chemical pesticides

Additional policy is added as follows:

Policy AG 4.3.2: Build and maintain healthy soils

Program AG 4.3.2.2: Encourage farmers to monitor soils for organochlorinated pesticides in accordance with DTSC's 2008 Interim Guidance for Sampling Agricultural Properties (Third Revision).

1.6.2. Concerns Raised in Community Meeting:

In community meetings held as part of the General Plan development process, residents and stakeholders identified the following concerns:

- *Land Use* – A paucity of medical care facilities, and imbalance in the spread of development to the east side of the City
- *Circulation* – Limited connections between the east and west sides of the City; lack of regional connections between Delano, Wasco, and Bakersfield when using public transportation; and outdated crossing infrastructure.
- *Housing* – Limited housing options especially of affordable housing options
- *Economic Development* – A distinct lack of local businesses, career training opportunities, big-box retailers, and other related commercial establishments.
- *Safety* – Inadequate drainage and flood control infrastructure
- *Public Facilities & Environmental Justice* – Inadequate sidewalks, lighting, and infrastructure on the east side of the City

1.6.3. Native American Tribal Consultation:

Consistent regulations of the State of California (e.g., SB 18, AB 52, et al), the project team initiated consultation with Native American Tribes likely to be traditionally and culturally affiliated with the project area. With assistance from the Native American Heritage Commission, the project team identified nineteen Native American Tribes and contacted each via a letter. The appendix includes copies of the letters.

In accordance with the State of California Tribal Consultation Guidelines and Government Code §65352.3, the letters officially invited each Tribe to participate in consultation regarding the City of McFarland 2040 General Plan update. Consultation is intended to ensure that California Native American Tribes are given 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 and resources and also allows for consideration of cultural resources in the context of broad local land use policy before individual, site-specific, project-level land use decisions are made.

If available, technical reports, such as cultural resource and archaeological reports, would be shared with respective Tribes later in the Environmental Impact Report process. Meanwhile, searches of archeological and cultural resources revealed the following:

- The Native American Heritage Commission (NAHC) has conducted its search in December 2020 for archaeological resources and concluded as follows:

  "The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative."

- The California Historical Resources Information System (CHRIS) search on a recent General Plan EIR for the City of McFarland to identify all previous cultural resources work and previously recorded cultural resources within a 200-foot radius of the project site "identified 14 previously conducted studies and 14 cultural resources within the project site and 200-foot buffer. All of the cultural resources are built environment and were constructed during the 20th century. One resource, the Friant-Kern Canal, is determined as eligible for the California Register of Historical Resources (CRHR) and National Register of Historic Places NRHP." (City of McFarland. 2016. General Plan Amendment Environmental Impact Report).

The Appendix to section 1.6 includes a list of Tribes contacted and responses received, if any. Overall, responses indicate the project area is outside ancestral homes for which the Tribes did not request consultation.

1.7. Significant Impacts and Mitigation Measures

Table 1.1 summarizes the conclusions of the environmental analysis contained in this EIR and presents a summary of impacts and mitigation measures identified. It is organized to correspond with the environmental issues discussed in Chapter 4, Section 4.1 to 4.17. The table is arranged in four columns: 1) environmental impacts; 2) significance prior to mitigation; 3) mitigation measures; and 4) significance after mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapter 4, Section 4.1 through 4.17.

Table 1-1 summarizes the environmental analysis and categorizes impacts as either "less-than-significant," "potentially significant," "significant," or "no impact." These terms are defined as follows:

No impact: The project does not create an impact in that category.

Less than significant: A less than significant impact is one that would not reach or exceed the standard or threshold of significant as determined in this analysis. Therefore, no substantial environmental change would occur or necessitate the need for mitigation measures.

Potentially significant: The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project.

Significant: A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project.

TABLE 1-1: SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
1. AESTHETICS			
AE-1: Have a substantial adverse effect on a scenic vista?	NI	N/A	NI
AE-2: Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	NI	N/A	NI
AE-3: In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	LTS	N/A	LTS
AE-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
2. AGRICULTURE			
AG-1: 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?	PS	**AG-1A:** Prohibit annexation of properties under Williamson Act contracts unless a notice of Nonrenewal has been filed. **AG-1B:** Continue to implement a Right-to-Farm ordinance.	LTS
AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract?	LTS	N/A	LTS
AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	NI	N/A	NI
AG-4: Result in the loss of forest land or conversion of forest land to non-forest use?	NI	N/A	NI

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
AG-5: 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?	PS	**Mitigation Measure AG-5a:** Implement Mitigation Measure AG-1a: Prohibit Annexation of properties under Williamson Act contracts unless a notice of Non-renewal has been filed	PSU
3. AIR QUALITY			
AQ-1: Conflict or obstruct implementation of the applicable air quality?	LTS	N/A	LTS
AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	LTS	N/A	LTS
AQ-3: Expose sensitive receptors to substantial pollutant concentrations?	PS	**Mitigation AQ-3a:** Avoid siting of new substantial emission sources within CARB recommended screening distances of sensitive receptors.	LTS
AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	PS	**Mitigation AQ-4a:** Update zoning to meet screening distance	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
4. BIOLOGOCAL RESOURCES			
BIO-1: 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?	PS	**Mitigation BIO-1a:** Comply with all State and Federal requirements for the protection of endangered and special status species. **Mitigation BIO-1b:** Protect and mitigate impacts on listed and special status species in accordance with CEQA and/or NEPA regulations	LTS
BIO-2: 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?	NI	N/A	NI
BIO-3: 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?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
BIO-4: 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?	LTS	N/A	LTS
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	LTS	N/A	LTS
BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	LTS	N/A	LTS
5. CULTURAL: ARCHEOLOGICAL AND HISTORICAL RESOURCES			
CULT-1: Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	NI	N/A	NI
CULT-2: Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5?	PS	**CULT-2A:** In the event that archeological or paleontological resource is unearthed or otherwise discovered during construction related activities associated with the proposed Plan, all work must be suspended until a qualified archeologist is consulted.	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
CULT-3: Disturb any human remains, including those interred outside of formal cemeteries?	PSU	**CULT-3A:** In the event human remains are discovered during the build-out of the Plan's proposed developments, construction must be stopped, and a qualified coroner must be contacted to determine if the remains are of Native American origin. If the coroner makes this determination, the coroner should contact the Native American Heritage Commission within 24 hours.	LTS
ENERGY			
*Refer to **Section 18** on Energy*			
6. GEOLOGY AND SOILS			
GEO-1 (1-i): 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?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
GEO-2 (1-ii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?	LTS	N/A	LTS
GEO-3 (1-iii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic related ground failure, including liquefaction?	LTS	N/A	LTS
GEO-4 (1-iv): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	LTS	N/A	LTS
GEO-5: Result in substantial soil erosion or the loss of topsoil?	LTS	N/A	LTS
GEO-6: 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?	LTS	N/A	LTS
GEO-7: 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?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
GEO-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	LTS	N/A	LTS
GEO-9: Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	LTS	N/A	LTS
7. GREENHOUSE GAS EMISSIONS			
GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?	LTS	N/A	LTS
GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs?	LTS	N/A	LTS
8. HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	PS	**Mitigation HAZ-1:** All hazardous material production and transportation should comply with state and local regulations and Hazardous Waste Management Plans	LTS
HAZ-2: 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?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LTS	N/A	LTS
HAZ-4: 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?	LTS	N/A	LTS
HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	NI	N/A	NI
HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	N/A	LTS
HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	NI	N/A	NI

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
9. HYDROLOGY AND WATER QUALITY			
HY-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	LTS	N/A	LTS
HY-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	PS	**Mitigation HY-2a:** Expand wastewater treatment allowing for additional wastewater to be recycled for agricultural irrigation to reduce consumption of fresh groundwater and recharge the supply. **Mitigation HY-2b:** Develop a water management plan to use recycled water in excess of agricultural demand for other purposes. **Mitigation HY-2c:** Adopt a water efficient landscape ordinance to reduce the amount of potable water used for landscape irrigation. **Mitigation HY-2d:** Comply with all State of California Water Conservation measures and the Sustainable Groundwater Management Act.	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
HY-3(3-i): 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?	LTS	N/A	LTS
HY-4(3-ii): 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	LTS	N/A	LTS
HY-5(3-iii): 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 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?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
HY-6(3-iv): 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 impede or redirect flood flows?	LTS	N/A	LTS
HY-7: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	LTS	N/A	LTS
HY-8: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	PS	**Mitigation HY-8a:** Develop a water management plan to use recycled water in excess of agricultural demand for other purposes. **Mitigation HY-8b:** Comply with all State of California Water Conservation measures and the Sustainable Groundwater Management Act.	LTS
10. LAND USE AND PLANNING			
LU-1: Physically divide an established community?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
LU-2: 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?	LTS	N/A	LTS
11. MINERAL RESOURCES			
MR-1: 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?	LTS	N/A	LTS
MR-2: 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?	LTS	N/A	LTS
12. NOISE			
NOISE-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LTS	N/A	LTS
NOISE-2: Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	LTS	N/A	LTS

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NOISE-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	NI	N/A	NI
13. POPULATION AND HOUSING			
POP-1: 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)?	LTS	N/A	LTS
POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	LTS	N/A	LTS

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DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
14. PUBLIC SERVICES			
PS-1: 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 Fire protection?	LTS	N/A	LTS
PS-2: 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 Police protection?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
PS-3: 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 Schools?	PS	**Mitigation PS-3a:** Work with school district to identify population growth thresholds that require new school facilities to maintain adequate level of service for the growing youth population.	LTS
PS-4: 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 Parks?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
PS-5: 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 Other public facilities?	PS	**Mitigation PS-5a:** Coordinate with Kern County Library to address the specific needs of the community and funding sources required to build library services to meet those needs.	LTS
15. RECREATION			
REC-1: 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?	LTS	N/A	LTS
REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	LTS	N/A	LTS
16. TRANSPORTATION			
TRANS-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
TRANS-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? . . . . i.*e., Is VMT exceeding an applicable threshold of significance?*	LTS	N/A	LTS
TRANS-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	NI	N/A	NI
TRANS-4: Result in inadequate emergency access?	LTS	N/A	LTS
TRIBAL CULTURAL RESOURCES			
*Refer to **Section 19** on Tribal Cultural Resources*			

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17. UTILITIES AND SERVICE SYSTEMS			
UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	PS	**UTIL-1a:** Adhere to construction, enhancement, and expansion outlined in the Storm Drain Master Plan to ensure adequate capacity for projected demand as a result of future growth. **UTIL-1b:** In addition to ensuring orderly and efficient expansion of the storm drainage system, require on-site storm water retention for future development to minimize environmental impacts. **UTIL-1c:** Develop and implement Low Impact Development policies for implementation during construction or expansion of storm water drainage facilities to minimize environmental effects and runoff.	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
UTIL-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	PS	**UTIL-2a:** Prepare an urban water management plan (UWMP) as population grows and the City's service area expands to comply with SB 7X-7 (Water Conservation Act of 2009). **UTIL-2b:** Convert landscapes to drip systems and replace those requiring significant irrigation with drought tolerant vegetation. **UTIL-2c:** Collaborate and maintain consistency with SSJMUD Management Area Plan to foster decreased water use in public landscapes by 2035 by 25% of 2018 level and to achieve groundwater sustainability by 2040.	LTS
UTIL-3: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has (in)adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	PS	**UTIL-3:** Develop and adopt a Sewer Master Plan to guide replenishment of water supply and service delivery to meet future demand.	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
UTIL-4: 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?	LTS	N/A	LTS
UTIL-5: Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	LTS	N/A	LTS
18. ENERGY			
ENE-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	LTS	N/A	LTS
ENE-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	LTS	N/A	LTS
19. TRIBAL CULTURAL RESOURCES			
TRIBE-1(1-i): 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 the local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	NI	N/A	NI

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
TRIBE-2(1-ii): Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a 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?	NI	N/A	NI
20 WILDFIRE			
FIRE-1: Substantially impair an adopted emergency response plan or emergency evacuation plan?	LTS	N/A	LTS
FIRE-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	LTS	N/A	LTS
FIRE-4 Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	LTS	N/A	LTS
21. MANDATORY FINDINGS OF SIGNIFICANCE			
MFS-1: Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	LTS	N/A	LTS

Impact Criteria	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
DEFINITIONS: **No Impact (NI):** The project does not create an impact in that category **Less than significant (LTS)**: A less than significant impact is one that would not reach or exceed the standard or threshold of significance as determined in this analysis. Therefore, no substantial environmental change would occur. **Potentially significant (PS):** The project would cause a potentially substantial, adverse change in environmental conditions described in that impact category, within the area affected by the project. **Potentially Significant & Unavoidable (PSU):** A significant impact is a substantial, or potentially substantial, adverse change in the environment resulting from implementation of the Proposed Project which cannot be adequately addressed by mitigation.			
MFS-2: Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	LTS	N/A	LTS
MFS-3: Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	LTS	N/A	LTS

2. Introduction

The Environmental Impact Report (EIR) provides an analysis of the potential environmental impacts of the adoption and implementation of the proposed McFarland 2040 General Plan (Plan). This analysis is intended to inform decision-makers, responsible agencies, and the public of the nature of the 2040 General Plan and potential effects on the environment. The EIR is prepared in accordance with, and in fulfillment of, the requirements of the California Environmental Quality Act (CEQA). The City of McFarland is the Lead Agency under CEQA.

2.1. Proposed Action

The Preferred Growth Alternative is the vision for development changes in McFarland by the year 2040. It was developed with the community's preferences of concepts in the three development alternatives detailed in General Plan Chapter 4: Development Alternatives. This section presents community-wide features, land use, and circulation concepts within five key growth areas. The Preferred Growth Alternative reflects future land use designations, housing allocation, and circulation improvements needed to meet the population growth projections and targets for job growth. It therefore carries implications for each of the General Plan elements: Land Use, Circulation, Housing, Conservation, Open Space, Safety, Noise, Public Facilities, Economic Development, Community Design, Health, Environmental Justice, Air Quality, and Sustainable Agriculture.

The Preferred Growth Alternative is directly based on community feedback from community meetings, particularly Meeting 3 of February 20, 2020 during which three development alternatives were presented. The Preferred Growth Alternative focuses on creating a diverse local economy supported by a housing stock that accommodates a growing population and balances land development and open space. Major growth areas include: Revitalized Downtown, West Expansion, Whisler Road Neighborhood, Southern Commercial Corridor, and Famoso Industrial and Commercial Center. These growth areas introduce medium-density, high-density, and mixed-use development, as well as accessory dwelling units (ADUs) in residential neighborhoods that are eligible for the additional units using vacant and underutilized parcels. In addition, the Preferred Growth Alternative promotes sustainable design and improvements to the City's circulation network. Circulation improvements focus on creating a network of complete streets, which provide space for automobiles, pedestrians, and bicycles, along with an expanded public transportation system to serve internal circulation needs while it connects McFarland residents to neighboring communities.

Under the Preferred Growth Alternative, McFarland would transform into a connected community that can accommodate growth in population and economic activity. Residents can travel from home to work and shopping by multiple modes, while visitors are drawn to the City's vibrant commercial opportunities. The vision includes multiple areas of residential development infrastructure for active transportation and

pedestrian safety, and the creation of a comprehensive transportation network. Combined, these transformations can help McFarland become a magnet for residential and commercial activity.

2.2. EIR Procedures and Scope

This program EIR was prepared in accordance with CEQA guidelines and regulation to assess environmental effects associated with implementation of the proposed Plan, as well as anticipate future discretionary actions and approvals. As established in Article 1 of CEQA, the basic purposes of CEQA and of this document are to:

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

As stated in the CEQA Guidelines, an Environmental Impact Report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid possible environmental damage. An EIR is the most comprehensive and common documentation identified in the statute and CEQA Guidelines. CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project would cause substantial adverse changes in the environment, the governmental agency must respond to the information through various methods that can include changing or altering the proposed project or program, imposing conditions on project approval or choosing an alternative way of meeting the same need. EIRs intend to provide an objective, factually supported and full-disclosure analysis of the environmental consequences associated with a proposed project or program that has the potential to result in environmental effects.

Additionally, an EIR is a tool that is used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to project approval, a lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and CEQA Guidelines, determine whether it reflects the independent judgement of the lead agency, and adopt findings concerning the project's potentially significant environmental effects, impacts and alternatives. In the event a proposed project would result in significant impacts that cannot be avoided, the lead agency must adopt a Statement of Overriding Considerations. When an agency decided to approve a project and adopt a Statement of Overriding Considerations, it must reflect the ultimate balancing of competing public objectives (including environmental, legal, technical, social, and economic factors).

2.2.1. Potentially Significant Effects

Pursuant to CEQA Sections 15126.2 and 15126.4, the environmental issues addressed in this EIR include the following:

1. Aesthetics
2. Agricultural Resources
3. Air Quality
4. Biological Resources
5. Cultural: Archeological and Historical Resources
6. Geology and Soils
7. Greenhouse Gas Emissions
8. Hazards
9. Hydrology and Water Quality
10. Land Use
11. Mineral Resources
12. Noise
13. Population and Housing
14. Public Facilities
15. Recreation
16. Transportation
17. Utility
18. Energy
19. Tribal Cultural Resources
20. Wildfire

2.2.2. Incorporation by Reference

The Following documents were incorporated by reference in this EIR, Consistent with Section 15150 of the State CEQA Guidelines, and are available for review at the City of McFarland City Hall:

- City of McFarland 2040 General Plan (as amended), 2021
- City of McFarland Background Report (as amended), 2021
- City of McFarland Municipal Code (as amended)
- City of McFarland 2015-2023 Housing Element
- Kern County General Plan (Online at: https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf)
- Southern San Joaquin Municipal Utility District (SSJMUD) Management Area Plan, 2014 (Online at: http://www.kerngwa.com/assets/southern-san-joaquin-municipal-utility-district-management-area-plan.pdf)

The EIR Uses Previously adopted regional and statewide plans and programs, agency standards, and background studies in its analysis. Whenever existing environmental documentation or previously

prepared documents and studies were utilized for the preparation of the EIR, the information was summarized and incorporated by reference for the reader. Chapter 4.0, sections 4.1 through 4.20 of the EIR provide references used for preparation of the EIR.

2.3. Report Organization

This EIR is organized into the following chapters:

Chapter 1. Executive Summary: Summarizes the Background description of the McFarland 2040 General Plan, the format of the EIR, alternatives, critical issues remaining to be resolved, potential environmental impacts, and mitigation measures identified for the Plan. The Executive Summary also includes a summary table describing recommended mitigation measures and indicating the level of significance of environmental impacts before and after mitigation.

Chapter 2. Introduction: Provides an overview of the purpose and use of an EIR, the EIR scope, report organization, and environmental review process.

Chapter 3. Project Description: Describes the Draft McFarland 2040 General Plan in detail. The description includes the location and boundaries of the Plan area, Plan characteristics, and the intended uses of the EIR.

Chapter 4. Environmental Assessment: Provides a summary of the baseline environmental conditions in the project area, including the existing physical setting and regulatory framework for each resource topic required under CEQA. A description and a brief statement of the rational for addressing the topics precede details on individual environmental topics. Chapter 4 also includes the preliminary methodology for determining the level of impact, a discussion of impacts of the project, any proposed mitigation measures, and a discussion of the significance after mitigation. Each topic area is organized as follows:

1. **Regulatory Framework:** A discussion of the regulatory environment that may be applicable to the proposed Plan including Federal, State, and local laws and regulations.
2. **Environmental Setting**: A description of the existing environment in and around the Plan area, as relevant for each topic area impact analysis.
3. **Methodology:** The methodology determining if the project exceeds the thresholds of significance. As a Program level EIR without project specifics, the methodology for determining significance of impact is often qualitative.
4. **Standards of Significance:** The thresholds of significance are the standards, or thresholds, by which impacts are measured, with the objective being the determination of whether an impact will be significant or less than significant.
5. **Impact Discussion:** Each impact associated with an environmental topic is discussed and listed by a number, for reference, that corresponds with the threshold with the threshold of significance for which the impact is being analyzed.
6. **Summary of Significant Impacts and Mitigation Measures:** A statement of qualification of impact, post mitigation, if mitigation measures are required.

Chapter 5. Significant Unavailable Adverse Impacts: Describes the significant, unavoidable, adverse impacts of the proposed Plan.

Chapter 6. Alternatives to the Proposed Plan: Considers the three alternatives to the Proposed Plan, including the CEQA required "No Project Alternative," known as the Business-As-Usual Scenario, Moderate Growth Scenario, Progressive Growth Scenario, and Preferred Growth Scenario.

Chapter 7. CEQA-Mandated Sections: Discusses growth inducement, cumulative impacts, unavoidable significant effects, and significant, irreversible changes as a result of the proposed Plan. This section identifies environmental issues scoped out pursuant to CEQA Guidelines Section 15128.

Chapter 8. Organizations and Persons Consulted: Lists the people and organizations who were contacted during the preparation of the EIR for the proposed Plan.

Chapter 9. Appendix: Consolidates additional details related to: (A) Technical details of greenhouse gas emissions, traffic, and energy analyses; (B) Response to comments on the Notice of Preparation; (C) Response to comments on the Draft EIR (in Final EIR); (D) Documentation of public outreach; and (E) Mitigation Monitoring Program.

2.4 Environmental Review Process

2.4.1 Draft EIR

As required by California law, this Draft EIR is made available for review by the public, interested parties, agencies, and organizations for a period of 45 days. Written comments on the Draft EIR are encouraged for incorporation in the Final EIR. Comment submission is to:

Maria Lara
City Manager
City of McFarland
401 W. Kern Avenue
McFarland, CA 93250

An electronic copy of the **Draft 2040 General Plan** is available at:
https://www.mcfarlandcity.org/DocumentCenter/View/2301/Vol2_McFarland-Draft-General-Plan_May-2021

Electronic copies of other **related planning documents** are available at:
https://www.mcfarlandcity.org/199/Planning-Department

This **Draft EIR** is also posted online on the website of the City of McFarland for public review and is accessible via:
https://www.mcfarlandcity.org/DocumentCenter/View/2302/Vol3_DEIR_05-16-2021

2.4.2 Final EIR

The City of McFarland is to review all written comments and prepare written responses for each one after the 45-day public review period. The Final EIR (FEIR) is to incorporate the comments received, responses to the comments received, and any changes made to the Draft EIR as a result of the comments received. The FEIR is to be presented to the City of McFarland for certification as the environmental review document for the proposed Plan. All persons who comment on the Draft EIR are to be notified of the FEIR and its availability along with the date of the public hearing.

2.4.3 Mitigation Monitoring

California Public Resource Code Section 21081.6 requires that a lead agency adopt a monitoring program or reporting program for any project for which it has made findings pursuant to Public Resource Code 21081 or adopt a Negative Declaration pursuant to Public Resources Code Section 21080 (c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. The Mitigation Monitoring Program for the proposed Plan is completed as part of the FEIR prior to consideration of the Plan by the City Council of McFarland.

3 Project Description

3.1 Location and Boundaries of the Plan

The Environmental Impact Report (EIR) for the City of McFarland 2040 General Plan provides an assessment of the environmental impacts associated with implementation of the proposed McFarland 2040 General Plan (proposed Plan), released in Draft form for public review on November 1, 2020. The proposed Plan replaces the existing General Plan, and is intended to guide investment, development, and conservation in McFarland through 2040. In compliance with the California Environmental Quality Act (CEQA), this chapter provides a detailed description of the proposed Plan, including the location and boundaries of the Plan Area, the primary objectives and the principal characteristics of the proposed Plan, and the intended uses of the DEIR.

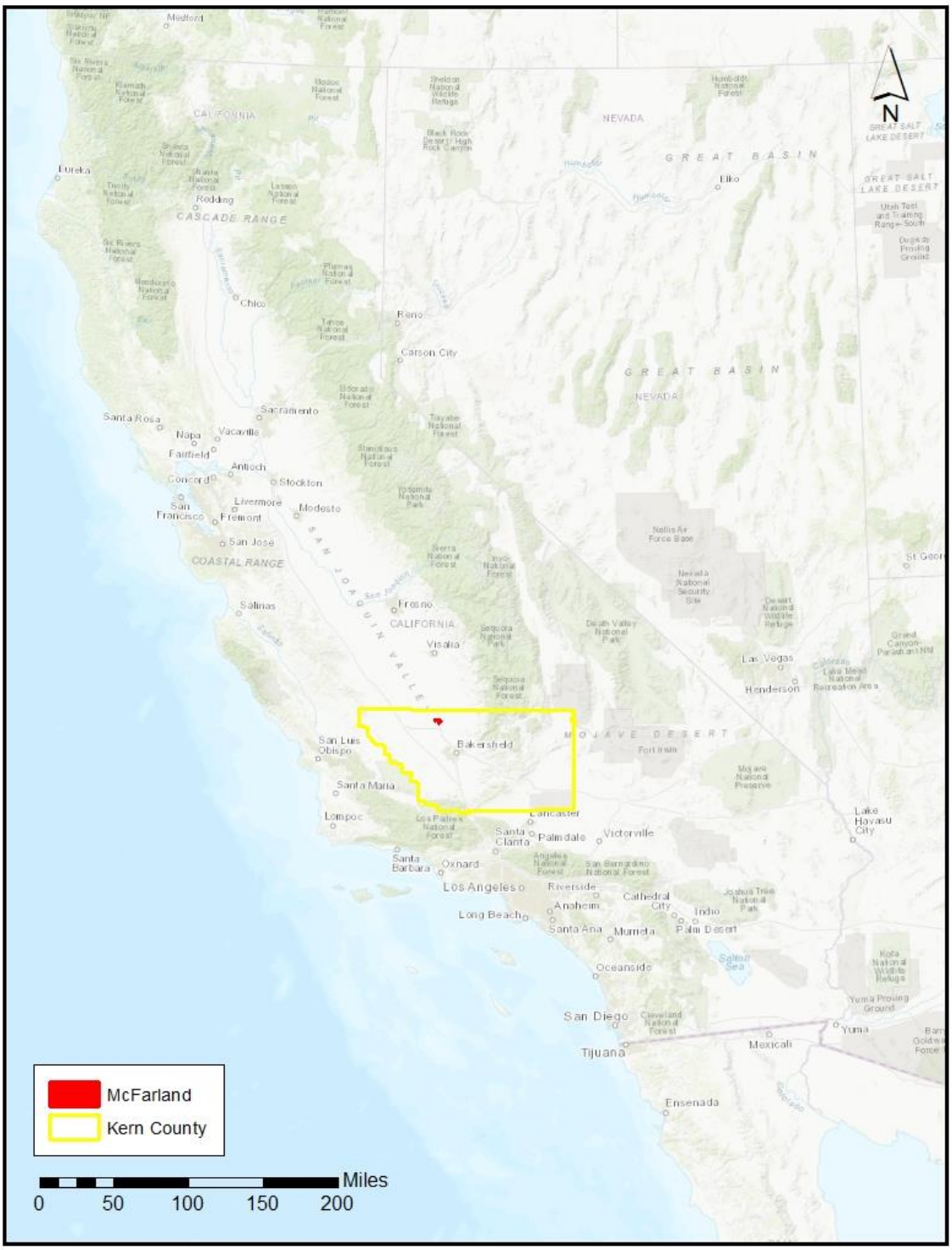
3.1.1 Project Setting

The City of McFarland sits in the northern section of Kern County within California's Central Valley. Map 3-1 displays the location of McFarland in relation to the State of California. Map 3-2 displays the location of McFarland within Kern County. The City is located along Highway 99, approximately 25 miles north of Bakersfield and approximately seven miles south of Delano. McFarland's boundaries encompass approximately three-square miles of land consisting of mostly residential, institutional, and agricultural uses. McFarland's Sphere of Influence and the surrounding area are primarily agricultural.

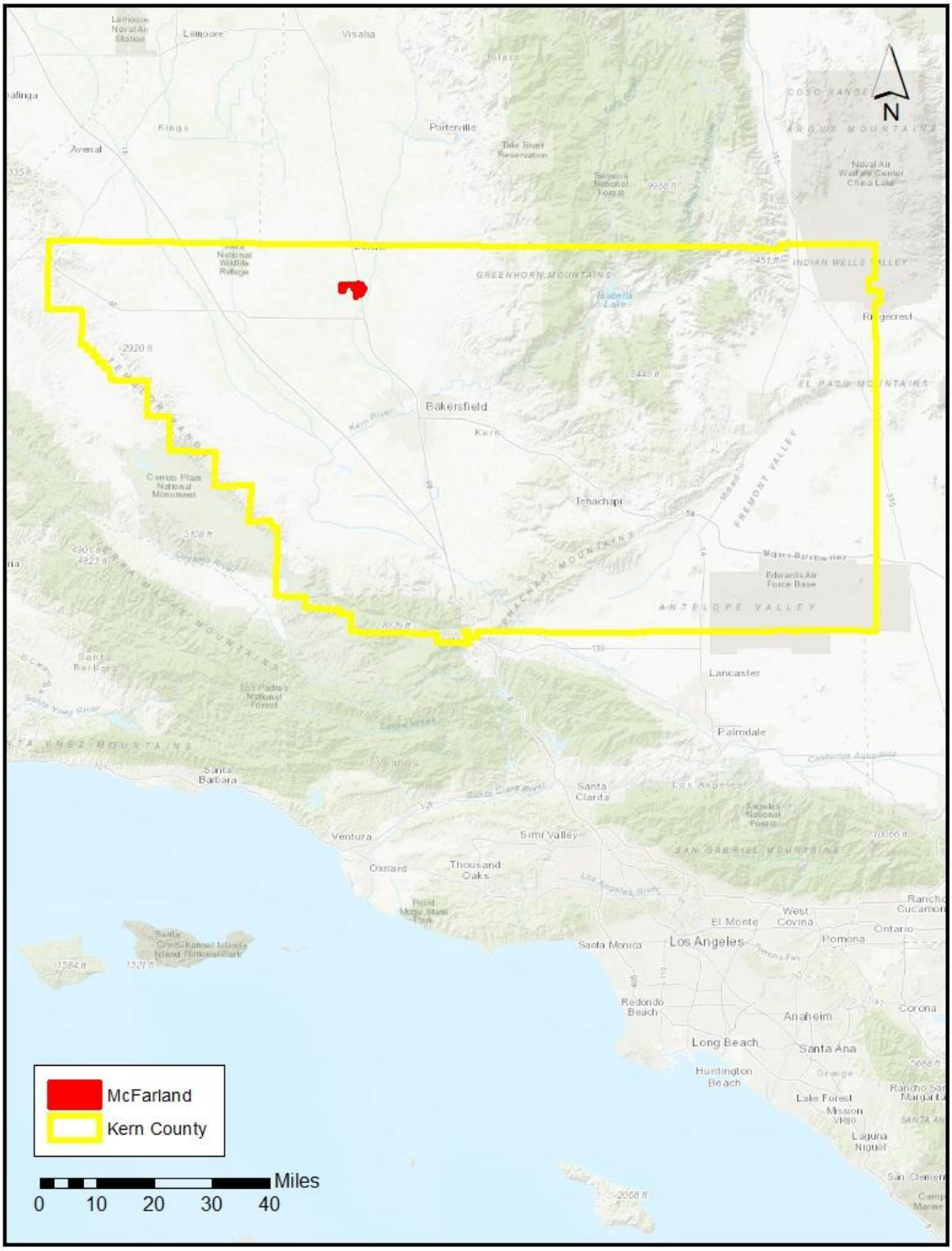
3.1.1Project Boundaries

Prior to 2020, the planning area for the City of McFarland encompassed approximately 12.12 square miles (7,760 acres), located south of the City of Delano and north of the City of Bakersfield. The area included both the east side and west side developments situated around the north-south Highway 99 and Union Pacific railroad rights-of-way. The Sphere of Influence (SOI) created by the Local Area Formation Commission (LAFCO) is defined as the planning boundary outside of the City's legal boundary that designates McFarland's probable future boundary and service area. The planning area is defined as the area to which this document refers, which is compiled from the boundaries of existing and potential future extents of the City and its sphere of influence. This document details the future development of the City. The City's SOI is slated to be expanded in 2020 with inclusion of the land along Highway 99 south toward the intersection with Highway 46. This proposed expanded Sphere of Influence is to encompass approximately 18.37 square miles (11,760 acres) and stretches south toward State Route 46 and the Famoso interchange. Since a Sustainable Agriculture Element is included in this General Plan update and agricultural lands surround the City and its SOI, the "study area" extends slightly beyond the proposed SOI to cover an area of approximately 23 square miles or 14,760 acres.

MAP 3-1: LOCATION OF MCFARLAND WITHIN THE STATE OF CALIFORNIA



MAP 3-2: MAP OF MCFARLAND WITHIN KERN COUNTY



3.2 Statement of Objectives

The McFarland 2040 General Plan is intended to represent the general expectations and wishes of its residents and decision-makers concerning future land use patterns and resource management. Longstanding community values reflected in the plan include resource conservation and maintenance of the City's heritage. These values are perpetuated by the General Plan. The Plan continues to direct new housing and commercial enterprises to areas that are suitable for development or are already developed. The 2040 General Plan ensures that important land use decisions are scrutinized for their potential to affect the quality of life and the environment. The primary purpose of the proposed Plan is to update the policy framework and land use designations in order to guide future development in McFarland, incorporate recent planning efforts undertaken by the City, and satisfy new State and regional regulations that have come into force since the General Plan was last adopted.

3.3 Plan Characteristics

The McFarland 2040 General Plan is intended to represent the general expectations and wishes of its residents and decision-makers concerning future land use patterns and resource management. Longstanding community values reflected in the plan include maintenance of the City's small-town character with a sense of place. These values are perpetuated by the General Plan. The 2040 General Plan ensures that important land use decisions are scrutinized for their potential to affect the quality of life and the environment.

3.3.1 Plan Background

To assure that the development of the Environmental Impact Report reflects best practices, other General Plan EIRs were reviewed for document content and organization. The General Plan is intended to address existing conditions and future environmental conditions for the City of McFarland.

3.3.2 Description of the Proposed Plan

3.3.2.1 PROPOSED PLAN ORGANIZATION AND CONTENT

The proposed Plan includes the state mandated general plan elements of land use, circulation, housing, open space, conservation, safety, and noise. In addition, the plan includes seven optional elements

addressing topics of particular importance to the McFarland community: Air Quality, Economic Development, Public Facilities, Sustainable Agriculture, Environmental Justice, Health, and Community Design. Table 3-1 summarizes the contents of the proposed Plan. Each element begins with a discussion of baseline and projected conditions in McFarland. Elements are organized under topical headings, followed by a series of numbered goals, policies, and actions, organized by topical subheadings matching the preceding narrative discussion. Goals describe a broad overall end state toward which the City directs its efforts. Objectives describe specific targets that are intended to be achieved. Policies are specific statements that guide decision-making as the City works to achieve a goal. Programs are actions carried out to implement policies and may be ongoing operating procedures or one-time measures. The Plan documents a summary of research methods, a land use inventory, community meetings, and public outreach. It describes development alternatives: slow growth, moderate growth, and aggressive growth; it adds McFarland's existing strengths and challenges, growth projections, and development opportunities and constraints. And finally, it describes the preferred growth scenario, including a discussion of key growth areas, circulation, and land use outcomes.

TABLE 3-1: GENERAL PLAN SUMMARY

Elements	Description
1. Land use	The Land Use Element is a guide for McFarland's future development. It designates the distribution and general location of land uses, such as residential, commercial, industrial, or public facilities. It also addresses the permitted density and intensity of development within the various land use designations.
2. Circulation	This element describes the City's transportation system and circulation network and provides an Inventory of existing roadway and infrastructure conditions. In addition, this Element addresses future directions for transportation in the City.
3. Housing	The purpose of the housing element is to guide long-term, comprehensive housing needs for residents of each income level within the City by providing a variety of housing types. The Housing Element covers topics of amount, type, location, condition, and affordability.
4. Conservation	The Conservation Element addresses Federal and State standards of environmental regulation, soil and mineral resources, biological resources, water resources, energy, and greenhouse gas (GHG) emissions as well as direction related to the conservation, development, and utilization of natural resources. The Element identifies goals, objectives, policies, and programs to guide the City into the future while minimizing impacts on the natural environment.
5. Open Space	The main goals of the Open Space Element are to focus on enhanced park safety and recreational programs, accessibility and connectivity, and aesthetically pleasing parks and open spaces within the City.

Elements	Description
6. Safety	The Safety Element addresses the protection of humans and property from natural and man-made hazards. Seismic, geologic, fire, and flood hazards are addressed as required under California Government Code 65302(g). The Element also includes safety concerns of crime and hazardous materials.
7. Noise	The element's purpose is to identify noise sources and sensitive receptors within the City. The element includes goals, objectives, policies, and programs to alleviate unwanted sound produced in McFarland.
8. Public Facilities	Public services and facilities are fundamental components of urbanized areas that support daily functions and quality of life in the community. The Public Facilities element covers topics of water infrastructure, water supply, storm water management, wastewater treatment, solid waste disposal services, police services, fire services, school facilities, and library facilities.
9. Economic Development	The Economic Development element is an optional element of the General Plan. The goals, objectives, policies, and programs in this Element aim to expand and diversify the City's economy. By aligning and analyzing key factors that drive McFarland's local economy, as well as the City's role within the Kern County region, this element can help guide economic development through the appropriate allocation of land uses.
10. Community Development	The Community Design Element identifies existing conditions of McFarland's built environment and provides ways to preserve and enhance desirable community attributes. The element also aims to enhance the physical character of the City and to guide the form and appearance of neighborhoods, streets, parks, and public facilities as well as new development.
11. Health	The Health Element addresses adequate access to recreation and open space, healthy foods, medical services, active transportation, quality housing, economic opportunities, safe public spaces, and environmental quality. This element uses various indicators and standards to measure health and wellness conditions established by federal, state, and local agencies.
12. Environmental Justice	The City of McFarland is required by law to have an Environmental Justice Element due to its designation as a disadvantaged community. The purpose of the Environmental Justice Element is to identify objectives and policies to reduce compounded health risks including pollution exposure, food insecurity, and insufficient physical activity. The element also requires jurisdictions to promote public participation in the decision-making process and prioritize the needs of disadvantaged communities.
13. Air Quality	This element discusses the status of the City in meeting federal, state, and local air quality standards and provides an overview of the ambient air quality conditions, a description of the local setting including air quality conditions, and major pollutant sources and air quality issues pertinent to the City's future.

Elements	Description
14. Sustainable Agriculture	The Sustainable Agriculture Element addresses managed production and conservation of agricultural lands to sustain the role of Agriculture as a mainstay of the local economy while it contributes to the State economy. The policies under the Sustainable Agriculture Element seek to preserve existing open spaces and agriculturally productive land while allowing for responsible conversion of land for needed housing and commercial development.

3.3.2.2 PROPOSED LAND USE

PLAN DESCRIPTION

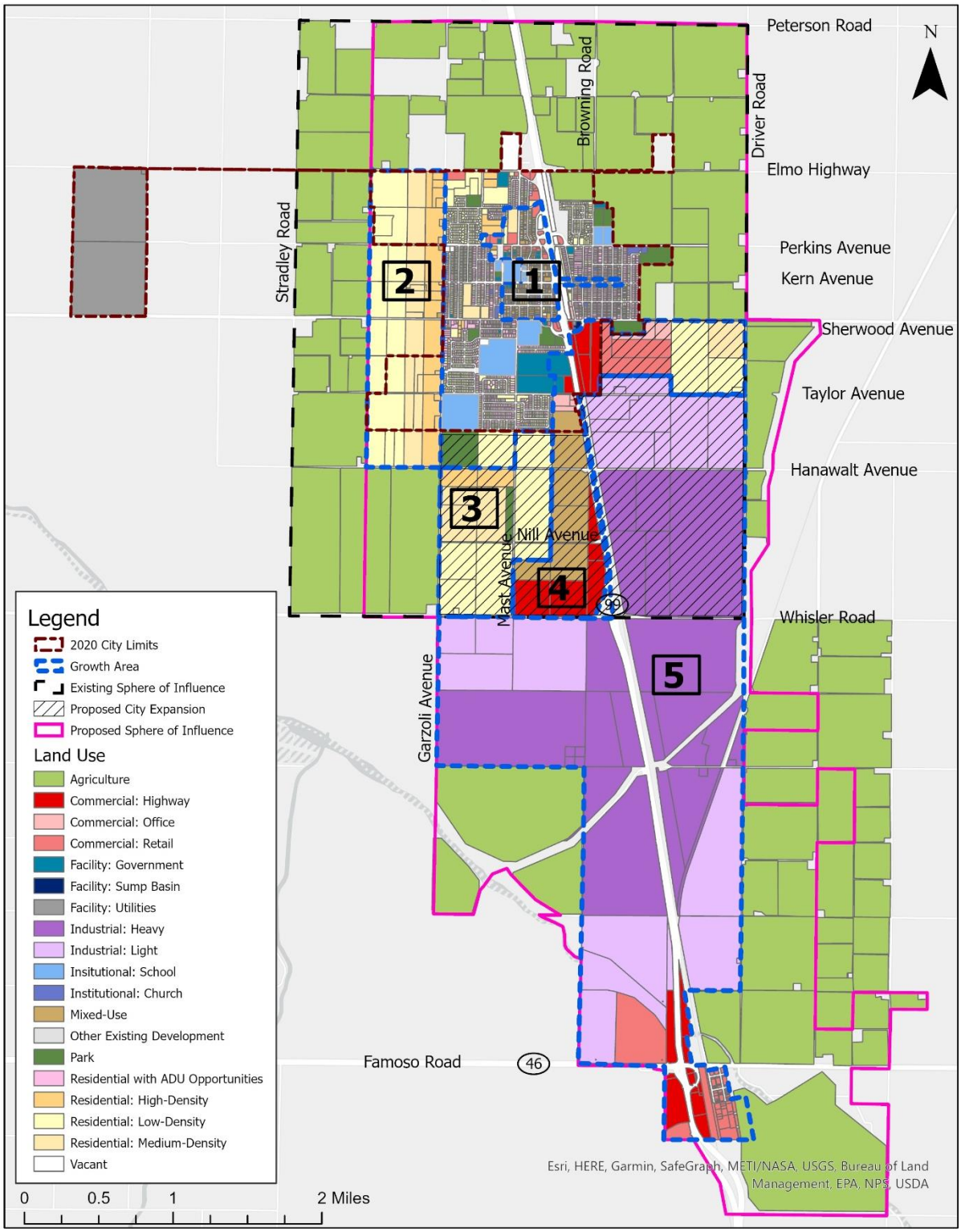
The Proposed Plan is to transform McFarland into a connected community that can accommodate growth in population and economic activity. Residents can travel from home to work and shopping by multiple modes, while visitors are drawn to the City's vibrant commercial opportunities. The vision includes multiple areas of residential development, infrastructure for active transportation and pedestrian safety, and the creation of a comprehensive transportation network. Combined, these transformations can help McFarland become a magnet for residential and commercial activity.

The Plan allocates sufficient space to accommodate population, housing, and jobs through the year 2040 for the most aggressive growth scenario. Based on community feedback and demographic projections, land uses are allocated to balance housing and jobs, expand housing options, and increase job opportunities for a growing population. Therefore, growth areas are to include such land uses as mixed-density housing, mixed-uses, neighborhood and highway commercial, and offices as well as industries.

The Plan demarcates five key growth areas. Development within each key growth area aims to serve the daily needs of nearby residents and businesses in order to create a more walkable, less auto-dependent city.

Map 3-3 shows the overall General Plan land use map with the five key growth areas. They include: 1. Revitalized Downtown; 2. West Expansion; 3. Whisler Road Neighborhood; 4. Southern Commercial Corridor; and 5. Famoso Industrial and Commercial Center.

MAP 3-3: GENERAL PLAN LAND USE MAP WITH KEY GROWTH AREAS



1. Downtown Infill

Downtown is the economic and cultural center of the City of McFarland. In the Plan, vacant and underutilized lots on both sides of Kern Avenue and Highway 99 offer opportunities for mixed-use development and for accessory dwelling units. In addition, pedestrian crossings on Kern Avenue and the addition of complete streets are to create vibrant, safe corridors in downtown. Traffic calming measures such as raised crosswalks and flashing signage and added street trees and landscaping are to help improve walkability. This is needed to improve resident and visitor experience as well as safety for pedestrians and bicyclists traveling in the downtown area.

2. West Expansion

The West Expansion area is for predominantly residential land use with mixed densities ranging from low-to-high density. In the Plan, accommodation for growth is to be fulfilled by developing housing opportunities on City land under temporary agricultural use. These lands offer opportunity to provide multiple different housing options for residents of all needs within the City.

3. Whisler Road Neighborhood

The Whisler Road Neighborhood focuses on developing residential and commercial land uses south of the existing City limits. The area includes housing composed of mixed-density development with low-to-medium and high-density housing options. In addition, commercial uses are to expand convenience in shopping opportunities for residents in its adjoining mixed-use area. To complement the new land uses, open space opportunities are included to provide recreational uses for people within this section of the City.

4. Southern Commercial Corridor

The Southern Commercial Corridor focuses on developing commercial and office uses along Highway 99. The highway serves as a common connector for commercial use areas thereby easing their accessibility for all road users. In addition, expanding available office space in McFarland can further expand commercial opportunities. The commercial and office uses provide new economic opportunities.

5. Famoso Industrial and Commercial Center

South of the existing City limits along Highway 99, the Famoso Industrial and Commercial Center offers expansive space for industrial uses in the City. Industrial uses are envisioned to be primarily warehouse-type industries serving freight vehicles. In addition, some commercial uses are to include a variety of establishments to complement the existing highway asset.

ANTICIPATED EFFECTS AND OUTCOMES

1. Land Use

The Plan proposes changes to the Land Use Element to meet community growth targets and City needs in a way that would maintain McFarland's small-town character. This is achieved by concentrating commercial and residential infill development within the downtown, adding commercial and industrial development along the City's boundaries, and utilizing accessory dwelling units throughout. It provides

for a balanced mix of land uses with a full range of housing types, mixed-use development downtown and at critical nodes along major corridors, and vibrant commercial and industrial development along Highway 99 to support job growth. New, strategic infrastructure upgrades are to discourage leapfrog development and promote a compact urban form while promoting proper transitions and buffering between incompatible land uses.

2. Circulation

The circulation network for the Plan is aimed at creating a safe, efficient, sustainable, and equitable transportation environment in McFarland. This includes improving pedestrian and bicycle infrastructure with multi-use trails and pedestrian corridors, creating complete streets, adding intracity transit routes and service, and adding more regional transit stops to improve access to bus services with neighboring cities. These features are anticipated to give reliable alternative transportation options for people without access to private vehicles including the youth, elderly, and disabled. For convenience, alternative transportation modes, bicycle lanes, and pedestrian pathways are to connect with public transit. The transportation network can turn the City into walkable, bikeable, and transit-friendly place.

3. Housing

Housing in the Plan focuses on maintaining affordability within the City's housing stock, increasing mixed-use residential development downtown, and developing more variety of housing options for residents. These efforts focus within the downtown, west and south areas of the City.

4. Conservation

In order to help mitigate increased demand for natural resources during expansion, the Plan recommends decreasing water and energy demand within existing systems, substituting turf and water reliant vegetation with drought tolerant vegetation and equipping areas with high sun exposure with solar panels. Additionally, educating the public on water and energy reduction strategies can help offset the increasing demand for resources as McFarland expands.

Since there are several threatened and endangered species within Kern County, steps should be taken not to disturb their presence. A trained specialist should check for the San Joaquin Kit Fox, Tricolored Black Bird, Swainson's Hawk and Burrowing Owl before development occurs.

5. Open Space

The Plan is to distribute additional recreational open space so that neighborhoods are generally within a 1.5-mile reach of a park. The additions of recreational space are to go to the West Expansion area and the Whisler Road Neighborhood. The selection of these areas of McFarland for growth is in part due to the significantly fewer parcels of Williamson Act lands to the west of the City. Additionally, the Circulation Element includes pedestrians and cycling improvements to connect homes with recreational facilities. These additions are to help McFarland maintain its strong community core.

6. Safety

The Plan takes into consideration flooding and other natural disasters. It moves new residential development outside of the 100-year floodplain. Floodplain areas slated for industrial and highway commercial development are to be appropriately mitigated. Implementation of the Storm Drain Master Plan can assist this mitigation. New development is to conform to uniform state and national codes for fire and seismic hazards.

7. Noise

The Plan aims to reduce the main sources of noise: Highway 99 and the railroad. Development of sensitive receptors within the 65-decibel contour around these sources is to be restricted, and those within the 60-decibel contour are to have mitigation measures to limit noise levels. The potential for a sound barrier or sound wall is to be explored, which would help reduce noise levels in existing sensitive areas near Highway 99 and the railroad. Future industrial and commercial uses are to be located so that they do not cause excessive noise for existing sensitive receptors.

8. Public Facilities

Full build-out under the Plan may require additional staffing for police and fire services to maintain proper public safety response times and level of service. Population increase could increase student enrollment requiring new schools and park space. Major development is concentrated on the west side of McFarland which has the utility capacity to support it. Continuing to monitor water quality is important as the community continues to grow. Although McFarland's potable water resources are sound, it may be difficult to expand facilities requiring increased conservation. The sewer treatment plant is undergoing expansion in its processing capacity making room for expansion on the west side of the City.

9. Economic Development

The Plan uses infill and mixed-use redevelopment to revitalize the downtown, bringing commercial activity and jobs. The mixed-use development allows residents to live within walking distance of stores, eateries, and other services. The land allocated for highway commercial use along Famoso Road is situated to capture revenue from pass-through traffic and events at the Famoso Raceway. The large amounts of land dedicated to industrial and commercial use can make McFarland an inviting destination for economic development. Through these changes, McFarland can become a regional destination, providing mechanisms for increased revenue streams into the community.

10. Community Design

Community Design aims to improve the overall vibrancy, identity, and cohesion of McFarland. In the Plan, Community Design focuses on the creation of a City that is both attractive and functional. Development focuses on the downtown neighborhood and features complete streets accessible to all road users. Improved signage, crossings, and lighting are to contribute to improved safety and comfort within the City. Landscaping and entryways are to promote methods of wayfinding and improve the aesthetic appearance of McFarland. Design standards can work towards the creation of a uniform image for McFarland to attract visitors and please residents.

11. Health

The Plan prioritizes Health in McFarland by increasing accessibility to healthy foods and grocery options and implementing new recreational opportunities in the form of open and green spaces, as well as encouraging provision of additional medical services within the City. These features can improve the quality of life for residents, especially those suffering from health conditions. With the implementation of health-related programs, healthy lifestyle choices, such as walking, bicycling, choosing healthy food options, and outdoor activities in open and green spaces, are anticipated.

12. Environmental Justice

The anticipated effects of the Environmental Justice Element include the fostering of a community where residents and visitors are protected from environmental hazards and risks, with an emphasis on the impact of agricultural and noise pollution. McFarland's transportation network can provide alternatives to travel by car through the incorporation of walking, biking, and transit infrastructure. The needs and voices of minority and low-income community members are to be directly engaged in the planning process, especially regarding environmental decision-making.

13. Air Quality

The Plan may result in an increase in air pollution and greenhouse gas (GHG) emissions as the population grows and development increases. However, the alternative presents many strategies that can reduce per capita pollutants and GHG emissions, such as increasing accessibility and connectivity for pedestrians and bicyclists, investing in renewable energy, and improving public transit. Keeping the main form of McFarland compact with infill development, building mixed-use commercial, and neighborhood commercial areas can increase opportunities to walk or bike and thereby reduce greenhouse gas emissions and help combat climate change. In addition, the Plan seeks to educate the community about air quality conditions and actions residents may take to address the issue. Outreach efforts include making public data on air quality monitoring and hosting regular community meetings to discuss air quality conditions and mitigation measures.

14. Sustainable Agriculture

McFarland's primary resource is the vast agricultural lands that surround the City. Under the Plan, some urban lands under temporary agricultural use are to be returned to development to accommodate the growth of residential, commercial, industrial, highway commercial, and recreational open space. To the south of the City, some agricultural lands are to be converted to commercial use to boost the City’s aspirations for job growth but narrowing the SOI on the upper west side compensates with conservation of prime farmland.

3.4 Intended Uses of the EIR

This Program EIR serves as an environmental review for the adoption and implementation of the McFarland 2040 General Plan. As such, it provides an in-depth analysis of the environmental effects of the proposed McFarland 2040 General Plan. Section 15152 of the CEQA Chapter 3 Guidelines indicates that tiering "is appropriate when the sequence of analysis is from an EIR prepared for a general plan policy or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site specific EIR or negative declaration." Subsequent activities under the General Plan may utilize this EIR as the basis for determining whether the later activity may have any significant effects. The conclusions of this EIR can be incorporated where factors apply to the program as a whole. Subsequent projects under the Program EIR may include but are not limited to the following implementation activities:

- Rezoning of properties for consistency with the General Plan
- Amendments to the Zoning Code to achieve consistency with the General Plan (i.e., adoption of new development standards for residential zones)
- Approval of Specific Plans
- Approval of development plans including tentative maps, variances, conditional use permits, and other land use permits
- Approval of development agreements
- Approval and funding of public improvement projects
- Approval of resource management plans
- Issuance of permits and other approvals necessary for implementation of the General Plan
- Issuance of permits and other approvals necessary for public and private development projects

If a subsequent project or later activity would have effects that were not examined in this Program EIR or were not examined at an appropriate level of detail to be used for the later activity, an initial study and negative declaration, mitigated negative declaration, or EIR would need to be prepared. If the City finds that, pursuant to Section 15152 of the CEQA Guidelines, no new effects could occur or that new mitigation measures could be required on a subsequent project to address new effects, the City can approve the activity as being within the scope of the project covered by this Program EIR, and no new environmental documentation would be required. This EIR serves as an informational document for use by public agencies, the general public, and decision-makers. This EIR is not a City policy document; however, it does discuss the impacts of development pursuant to the proposed General Plan and related components and analyzes project alternatives. This Program EIR will be used by the City's Planning Commission and City Council to assess impacts prior to adoption of the General Plan. No other agency must approve the City's actions as described above, as no permits will be issued from any resource, regulatory, or planning agencies as part of project approval. In the interest of disclosure, this Program EIR has been sent to the following agencies for review and comment:

State Agencies
CA Dept. of Conservation
CA Dept. of Fish and Wildlife

CA Dept. of Food & Agriculture
CA Dept. of Forestry and Fire Protection
CA Dept. of Housing and Community Development
CA Dept. of Parks and Recreation
CA Dept. of Resources Recycling and Recovery
CA Dept. of Toxic Substances Control
CA Dept. of Water Resources
California Air Resources Board
California Emergency Management Agency
California Native American Heritage Commission
California Natural Resources Agency
California Office of Historic Preservation
California Office of Planning and Research State Clearinghouse
California Public Utilities Commission
CALTRANS District 5
CALTRANS District 6
CALTRANS Planning
Central Valley Regional Water Quality Control Board

Local Agencies
City of Delano
City of McFarland
City of Wasco
Delano Mosquito Abatement District
Kern Community College District
Kern Council of Governments
Kern County Area LAFCO
Kern County Dept. of Agriculture and Dept. of Weights & Measures
Kern County Dept. of Fish & Game
Kern County Dept. of Planning and Natural Resources
Kern County Dept. of Public Health Services
Kern County Dept. of Public Works
Kern County Historical Society
Kern County Transit
Kings County
McFarland Recreation and Park District
McFarland Unified School District
San Joaquin Valley Air Pollution Control District
Southern San Joaquin Municipal Utility District
Tulare County Administrative Office
Tulare County Board of Supervisors

Other Agencies

AT&T

PG&E

Southern California Edison

Spectrum

Union Pacific Railroad

The proposed Plan would require the following approvals and discretionary and ministerial actions by the following:

- McFarland Planning Commission
    - Recommendation to adopt the proposed Plan
    - Recommendation to certify the General Plan EIR pursuant to CEQA
- McFarland City Council
    - Adoption of the proposed Plan
    - Certification of the General Plan EIR pursuant to CEQA
    - Adoption of ordinances, guidelines, programs, and other mechanisms for implementation of the proposed Plan
- Other City Boards and Commissions:
    - Adoption of programs or other actions that implement the proposed Plan

4 Environmental Analysis

This chapter presents analyses of the programmatic and cumulative environmental impacts that would possibly result from the adoption of the City of McFarland 2040 General Plan (proposed Plan). This introduction explains the general environmental conditions under which the impact analysis is made, as described in Section 15125 of the CEQA Guidelines. Specific environmental conditions as they relate to individual topic areas, and detailed discussion of impacts can be found in section 4.1 through 4.20 of this chapter.

In addition to the general overview of the environmental setting of the City, this chapter addresses the impacts of the proposed Plan for the following topics in individual sections:

1. Aesthetics
2. Agricultural Resources
3. Air Quality
4. Biological Resources
5. Cultural: Archeological and Historical Resources
6. Geology and Soils
7. Greenhouse Gas Emissions
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Land Use and Planning
11. Mineral Resources
12. Noise
13. Population and Housing
14. Public Facilities
15. Recreation
16. Transportation
17. Utilities

Three other "newer" topics are discussed after the seventeen listed above as follows:

18. **Energy,** which has a slight overlap with *Utilities and Service Systems.*
19. **Tribal Cultural Resources,** which has a slight overlap with *Cultural: Archeological and Historical Resources.*
20. **Wildfire** which has a slight overlap with *Hazards & Hazardous Materials.*

To determine the potential impacts of the proposed Plan, each section of this chapter presents information on one of these 20 topics. Each section includes: a discussion of existing conditions and related regulations at the federal, state, and local levels; standards of significance and methodology by which to determine the level of potential impacts, if any; analysis of impacts based on the significance criteria put forth by the legislation; potential mitigation measures; and a conclusion with determination of potential significance after mitigation.

4.1 Aesthetics

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista?				x
2. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				x
3. In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			x	
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			x	

4.1.1 Environmental Setting

This section discusses the environmental setting regarding the aesthetics of the City of McFarland.

4.1.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to aesthetics in the proposed Plan.

Federal Regulations

National Register of Historic Places

The National Register of Historic Places was authorized under the National Historic Preservation Act of 1966. This act contains the official list of buildings, objects, sites, and districts designated for preservation due to their significance and contribution to US architecture, history, engineering, or archeology. The National Register recognizes structural resources of local, state, and national significance. At this time, no structures in McFarland have been recognized at the national level.

State Regulations

The California Scenic Highway Program, 1998

The California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), protects California State highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways, and works to enhance their natural scenic beauty. Nominated highways are evaluated on how much of the natural landscape passing motorists see, and the extent to which visual intrusions can affect the "scenic corridor." The benefits of the scenic highway designation are as follows:

1. Protection of the scenic corridor from encroachment of incompatible land uses.
2. Mitigation of activities within the corridor that detract from its scenic quality.
3. Modification of development to make it more compatible with the environment and in harmony with the surroundings.
4. Preservation of views of hillsides by minimizing development on steep slopes and along ridgelines.

California Register of Historic Resources

The California Register of Historic Resources program supports public recognition and protection of California resources of architectural, historical, engineering, archeological, and cultural significance. This program labels historic resources for state and local planning purposes, along with methods to determine eligibility for historic preservation grant funding. In addition, historic assets listed on the State register are granted certain protections under the California Environmental Quality Act. At this time, no properties in McFarland have been designated historic at the state level.

Mills Act

The Mills Act permits local government to participate in a historic preservation program to preserve community assets. The Mills Act is an economic incentive program created to provide property owners the opportunity to participate in the restoration of historic structures while receiving tax relief that is up to 50% in aid. The act requires a ten-year contract at minimum, in which property owners agree to preserve and maintain the property in compliance with historic preservation standards and conditions identified in property owner's contracts.

Local Regulations

McFarland Municipal Code

Chapter 17.134.070 of The McFarland Municipal Code requires that drawings and sketches of site development plans be reviewed by the McFarland Planning Commission to validate that plans are in accordance with procedures and development standards.

4.1.1.2 Existing And Baseline Conditions

Scenic Highways

The City of McFarland's Sphere of Influence (SOI) contains one highway (State Route 99). Highway 99 is not designated or eligible to be a California Scenic Highway. Therefore, any proposed plans would not be subject to the California Scenic Highway Program regulations.

Vistas

McFarland is located in a valley with the Sierra Nevada Foothills to the east and Temblor Mountain Range to the west of the City. These very distant mountains are not officially designated vistas; and their visibility will likely not be affected by any development.

Landmarks And Public Art

Landmarks are easily recognizable physical components within an area that provide a point of reference, serve as identity markers, and contribute to a sense of place. A landmark can be a structure, space, or natural feature. Some of the existing landmarks within McFarland include the "Home of the State Cross Country Champions" Water Tank (shown in Figure 4.1-1), the "Welcome to the City of McFarland" Monument Sign, and the Silhouette Runners on the Highway 99 Bridge.

There are a few pieces of public art distributed throughout the City in parks and on the sides of buildings. On the east side of McFarland is a mural depicting the history of McFarland in the vicinity of "Blanco Park." On the west side of McFarland, a long mural can be seen by the grass field next to the public library depicting an assortment of artwork with no recognizable narrative. Other than those two sightings, religious art murals can be spotted on market facades. Features such as this add unique character quality to McFarland and help define a place.

FIGURE 4.1-1: PICTURE OF "HOME OF THE STATE CROSS-COUNTRY CHAMPIONS" WATER TANK

Historical Resources

According to the existing General Plan, there are no National Historical Landmarks (NLM) or no California Historical Landmarks (CHL) in McFarland. The closest eligible place is the Friant-Kern Canal, which is eligible for National Register of Historic Places (NRPH). Aside from this singular off-site example, no historic sites or buildings in the City are listed on the National Register of Historic Places, the California Landmark Series, or List of State Points of Historical Interest. As the threshold for historical significance is fifty years old, certain buildings may be historically significant in the future, though no historic places were identified as significant upon site analysis and inventory, nor through community outreach. There are a few historic resources in other locations within Kern County.

Lighting

McFarland has relatively low light pollution. Although McFarland wishes to maintain the “small town” feel, community members have identified lack of adequate lighting on some public streets as a concern. However, the City has no policies or code regarding light pollution or glare. New developments in key growth areas may have a minor impact on the night sky, but any impacts must be balanced with providing safety to pedestrians and citizens.

Street Design

many of the poor sidewalk conditions were also located in the same areas where sidewalk conditions were labeled as “good.” Most poor-quality infrastructure conditions are found in northeastern McFarland. However, poor conditions also exist in the commercial areas located in the central areas of McFarland. Most of the good street conditions exist near or around where parks exist. This makes traveling to these locations by foot attractive to residents. On these sidewalks the conditions are comfortable, allowing for fair accessibility throughout the community. Trash and a lack of adequate public seating areas were noticed within most spaces where there appeared to be heavier pedestrian traffic. An increase in trash containers as well as recycling bins would be ideal in these spaces.

FIGURE 4.1-2: PICTURE OF MCFARLAND STREET

4.1.2 STANDARDS OF SIGNIFICANCE

4.1.2.1 CEQA THRESHOLDS

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed plan would have a significant effect on the environment with respect to aesthetics if it would:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
3. In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings;
   If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality;
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.2.2 METHODOLOGY

The aesthetic impact assessment was based on a review of the relevant documents, including the City of McFarland Municipal Code and the California Scenic Highway Program. The discussion follows and is organized by the impact criteria laid out in the CEQA Appendix G Guidelines.

4.1.3 IMPACT DISCUSSION

This section discusses the potential impacts to aesthetics resulting from buildout of the proposed Plan.

AE – 1 THE PROPOSED PLAN WOULD HAVE **NO IMPACT** ON SCENIC VISTAS.

There are no officially designated scenic vistas or viewsheds in the City of McFarland. As a result, the proposed Plan will have no effect on scenic vistas.

Applicable Regulations: None

Significance Before Mitigation: No impact

AE – 2 THE PROPOSED PLAN WOULD HAVE **NO IMPACT** ON SCENIC RESOURCES INCLUDING, BUT NOT LIMITED TO TREES, ROCK OUTCROPPINGS, AND HISTORIC BUILDINGS, WITHIN A STATE SCENIC HIGHWAY.

There are no officially designated State scenic highways in the City of McFarland nor are there any National or California Historic Landmarks in the City. The closest eligible place is the Friant-Kern Canal, which is eligible for National Register of Historic Places (NRPH). The proposed plan will have no effect on any scenic highways or historic landmarks.

Applicable Regulations: California Scenic Highway Program

Significance Before Mitigation: No impact

AE – 3 THE PROPOSED PLAN WOULD RESULT IN A **LESS-THAN-SIGNIFICANT** POTENTIAL TO: SUBSTANTIALLY DEGRADE EXISTING VISUAL CHARACTER OR QUALITY OF PUBLIC VIEWS IN NON-URBANIZED AREAS; OR CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY IN URBANIZED AREAS OF THE CITY.

The proposed developments in the Preferred Growth Scenario are centered around key growth areas, which intend to preserve the visual character of the City.

Downtown

Downtown is the economic and cultural center of the City of McFarland. In the Preferred Growth Alternative, vacant and underutilized lots on both sides of Kern Avenue and Highway 99 offer opportunities for mixed-use development and for accessory dwelling units. In addition, complete streets create vibrant, safe corridors in downtown to improve resident and visitor experience and safety.

West Expansion

The West Expansion area is for predominantly residential land use with mixed densities ranging from low-to-high density. In the Preferred Growth Alternative, accommodation for growth can be fulfilled by developing housing opportunities on City land under temporary agricultural use. These lands offer opportunity to provide multiple different housing options for residents of all needs within the City.

Whisler Road Neighborhood

The Whisler Road Neighborhood focuses on developing residential and commercial land uses south of the existing City limits. The area includes housing, commercial uses, and open space opportunities.

Southern Commercial Corridor

The Southern Commercial Corridor focuses on developing commercial and office uses along Highway 99. The highway serves as a common connector for commercial use areas thereby easing their accessibility for all road users. The expanded commercial and office uses provide new economic opportunities.

Famoso Industrial and Commercial Center

South of the existing City limits along Highway 99, the Famoso Industrial and Commercial Center offers expansive space for industrial uses in the City. Industrial uses are envisioned to be primarily warehouse-type industries serving freight vehicles. In addition, some commercial uses are to include a variety of establishments to complement the existing highway asset.

Policies proposed in the Plan include developing a well-balanced and diverse mix of residential, open space, commercial, and industrial uses while maintaining McFarland's small-town atmosphere. The plan focuses on connecting the community by ensuring safe and accessible paths of travel to commercial areas. In addition, the Plan contains the following policy proposals to reduce any impact to visual quality of the City:

Policy LU 1.4.1: Preserve open space in new residential developments.

Policy HO 1.1.1: Preserve existing housing stock, including affordable housing stock, through City regulations and other forms of assistance.

Policy ED 1.4.1: Promote McFarland's history.

Program ED 1.4.1.1: Provide legible and noticeable wayfinding signs signifying culturally significant sites for pedestrians and motorists.

Program ED 1.4.1.2: Showcase McFarland's legacy as cross-country champions.

Program ED 1.4.1.3: Advertise historic resources regionally.

Policy CD 1.1.1: Adopt a form-based code to regulate design and aesthetic qualities.

Program CD 1.1.1.1: Encourage formation of volunteer Design Review Committee of community members, planners, and designers.

Program CD 1.1.1.2: Adopt a theme that can be referenced when establishing McFarland's community aesthetic for developments.

Program CD 1.1.1.3: Develop community design guidelines to include visual descriptions of desired architectural and landscape aesthetics.

Program CD 1.1.1.4: Identify materials to use in defining McFarland including recommendations for roof tiling, building exteriors, building colors, hardscape materials and planting.

Program CD 1.1.1.5: Define design standards for commercial areas, sidewalks, recreational open space, and residential zones to align with the specific needs of these areas.

Policy CD 1.1.2: Update development and infrastructure to retain a consistent image of McFarland’s identity.

Program CD 1.1.2.1: Maintain design standards for aesthetic consistency of architecture and public spaces.

Program CD 1.1.2.2: Seek uniform aesthetics when replacing existing public lights, trashcans, and benches.

Policy CD 1.1.3: Make the City attractive to outsiders.

Program CD 1.1.3.1: Highlight and protect existing landmarks in McFarland.

Program CD 1.1.3.2: Install plaques to describe the relevance of existing landmarks and their histories.

Program CD 1.1.3.3: Use vegetation and signage to mark entrances to create inviting gateways into McFarland.

Policy CD 2.2.1: Increase the frequency of scheduled events.

Program CD 2.2.1.1: Focus the promotion of cultural activities and events in the downtown core and in centralized public parks.

Program CD 2.2.1.2: Streamline the process for reserving public park space for events.

Program CD 2.2.1.3: Encourage events organized by community organizations.

Policy CD 3.1.1: Enforce design which promotes safety of the community.

Program CD 3.1.1.1: Add lighting and improved accessibility in public areas and along public thoroughfares.

Applicable Regulations: Draft City of McFarland 2040 General Plan

Significance Before Mitigation: Less than significant

AE – 4 THE PROPOSED PLAN'S POTENTIAL TO CREATE A NEW SOURCE OF SUBSTANTIAL LIGHT OR GLARE, WHICH WOULD ADVERSELY AFFECT DAY OR NIGHTTIME VIEWS OF THE AREA IS LESS-THAN-SIGNIFICANT.

Build-out of developments from the proposed Plan would create new, but minor sources of glare and light. Any new lighting installed under the proposed developments would increase safety and security for residents and visitors. In addition, the Plan proposes the following policies to reduce any light and glare impacts:

Policy PF 6.1.1: Improve safety near parks, schools, and other pedestrian corridors.

Program PF 6.1.1.1: Conduct a lighting audit to determine where lighting is most needed in collaboration with the Tri-Agency.

Program PF 6.1.1.2: Pursue funding opportunities for construction and maintenance of lighting facilities.

Program PF 6.1.1.3: Meet lighting operating costs with special assessment fee on businesses.

Applicable Regulations: Draft City of McFarland 2040 General Plan

Significance Before Mitigation: Less than significant

4.1.4 Summary Of Potential Impacts And Mitigation Measures

The proposed Plan does not pose any potentially significant impacts to aesthetics and no mitigation measures are required as a result.

4.1.5 References

City of McFarland, CA. (2011). City of McFarland Consolidated General Plan. McFarland, CA. Retrieved October 25, 2020 from: http://ca- mcfarland.civicplus.com/DocumentCenter/View/1832/McFarland-2011-Consolidated-General-Plan?bidId=

City of McFarland, CA. (2021). Draft City of McFarland General Plan Update Background Report. McFarland, CA.

City of McFarland, CA. (2021). Draft City of McFarland 2040 General Plan. McFarland, CA.

City of McFarland Municipal Code. (2018, June 28). Retrieved October 25, 2020, from https://library.municode.com/ca/mcfarland/codes/code_of_ordinances?nodeId=MCFARLAND_CALIFORNIAMUCO

Caltrans. (2019, August). List of Eligible and Officially Designate State Scenic Highways. Retrieved October 25, 2020, from https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

4.2 Agricultural Resources

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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?		X		
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?			**X**	
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				**X**
4. Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
5. 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?		X		

4.2.1 Environmental Setting

The City of McFarland is located in a region dominated by agriculture production. The City contains primarily three significant land use types with respect to agricultural resources: Urban and Built-Up Land, Farmland of Local Importance, and Grazing Land (California Department of Conservation, 2016B).

4.2.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the Agricultural Resources element and potential impacts of the proposed Plan.

Federal Regulations

U.S. Department Of Agriculture (USDA), Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA's) Natural Resources Conservation Service (NRCS) administers multiple soil and farmland conservation programs in partnership with state, tribal, or local governments. The NRCS also maps soils and farmland uses to provide a comprehensive understanding of the state of agricultural land use across the country. (Natural Resources Conservation Service, 2016A).

Farmland Protection Policy Act (FPPA)

The Natural Resources Conservation Service (NRCS) is responsible for enforcing the Farmland Protection Policy Act (FPPA), which strives to minimize the conversion of agricultural land to non-agricultural uses through other federal programs. This is achieved by ensuring that other state, local, and private programs are compatible with the administered federal programs aimed at protecting farmland. Included in the definition of "farmland" is land that is prime, unique, or of statewide or local importance. Land subject to FPPA is not required to be in current use, and may include land for forests, pastures, or other uses. Federal agencies, state and local governments, tribes, or nonprofit entities can obtain technical assistance from NRCS if they wish to develop farmland protection programs or policies. The Land Evaluation and Site Assessment (LESA) program was also developed in conjunction with the FPPA (Natural Resources Conservation Service, 2016B).

State Regulations

California Farmland Conservancy Program

The California Farmland Conservancy Program (Public Resources Code Section 10200 et seq.) supports California Department of Conservation grant programs to provide funding for qualified nonprofit

organizations, such as land trusts, or local governments to purchase agricultural conservation easements or fee title from farmland owners on voluntary basis. (California Department of Conservation, 2016A).

Farmland Mapping And Monitoring Program (FMMP)

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) categorizes farmlands based on soil ratings and land use information. Farmland classifications, named "Important Farmlands" include seven categories:

- **Prime Farmland** is land ideal for the growth of high-yield crops, with the best combination of chemical and physical characteristics. This is based on its soil quality, growing season, and moisture level. Land that has been fallow for more than two mapping cycles and public non-agricultural lands are exempt from this category.
- **Farmland of Statewide Importance** is non-prime farmland that also has good physical and chemical conditions. Public and fallow land is excluded from this category.
- **Unique Farmland** is land that may not have good physical and chemical characteristics but is suitable for the production of other high-economic value crops. Public and fallow land is again excluded from this category.
- **Farmland of Local Importance** is land that meets none of the aforementioned standards but produces crops that have value in the local economy.
- **Grazing Land** is land that is suitable for livestock grazing or browsing, with a minimum mapping unit of 40 units.
- **Urban and Built-up Land** is land that contains primarily man-made structures and landscapes. It has minimum building density requirements of at least 1 unit to 1.5 acres.
- **Other Land** is land that does not conform to any of the aforementioned categories, but may include low-density development, confined livestock facilities, or areas with geologic features rendering them unsuitable for grazing (California Department of Conservation, 2016B)

Williamson Act

The California Land Conservation Act of 1965 (Government Code Section 51200 et seq.), known as the Williamson Act, is a preservation program that aims to protect open space and agricultural lands and promote efficient urban growth patterns. Through the Williamson Act, landowners can restrict property to open space or agricultural uses in exchange for reduced property taxes through 10-year contracts that self-renew annually with local or regional governments. The property tax reduction comes from assessing property based on the agricultural value of the land rather than the full market value. Landowners must petition a County Board of Supervisors or City Council for cancellation of a Williamson Act contract. (California Department of Conservation, 2016C.)

Local and Regional Regulations

Kern County Municipal Code and McFarland Local Policies

Kern County holds valuable land in preservation for agricultural use. The Kern County Municipal Code and the County General Plan detail these protections. Goals relate to agriculture including Goal 5 of McFarland's General Plan, which provides direction to "conserve prime agriculture lands from premature conversion", keep agricultural uses on lands suitable for production, and thereby ensure economic stability. Planned annexation and rezoning indicate the placement of heavy industry and residential uses on certain agricultural lands. However, potential exists to reserve alternate areas for preservation of agricultural production. Prime agricultural soils and lands represent a limited and diminishing natural resource. In addition, the loss of green space in the form of managed agricultural production means increased fire danger susceptibility, making productive farmland a mutually beneficial construct for all residents and workers in McFarland.

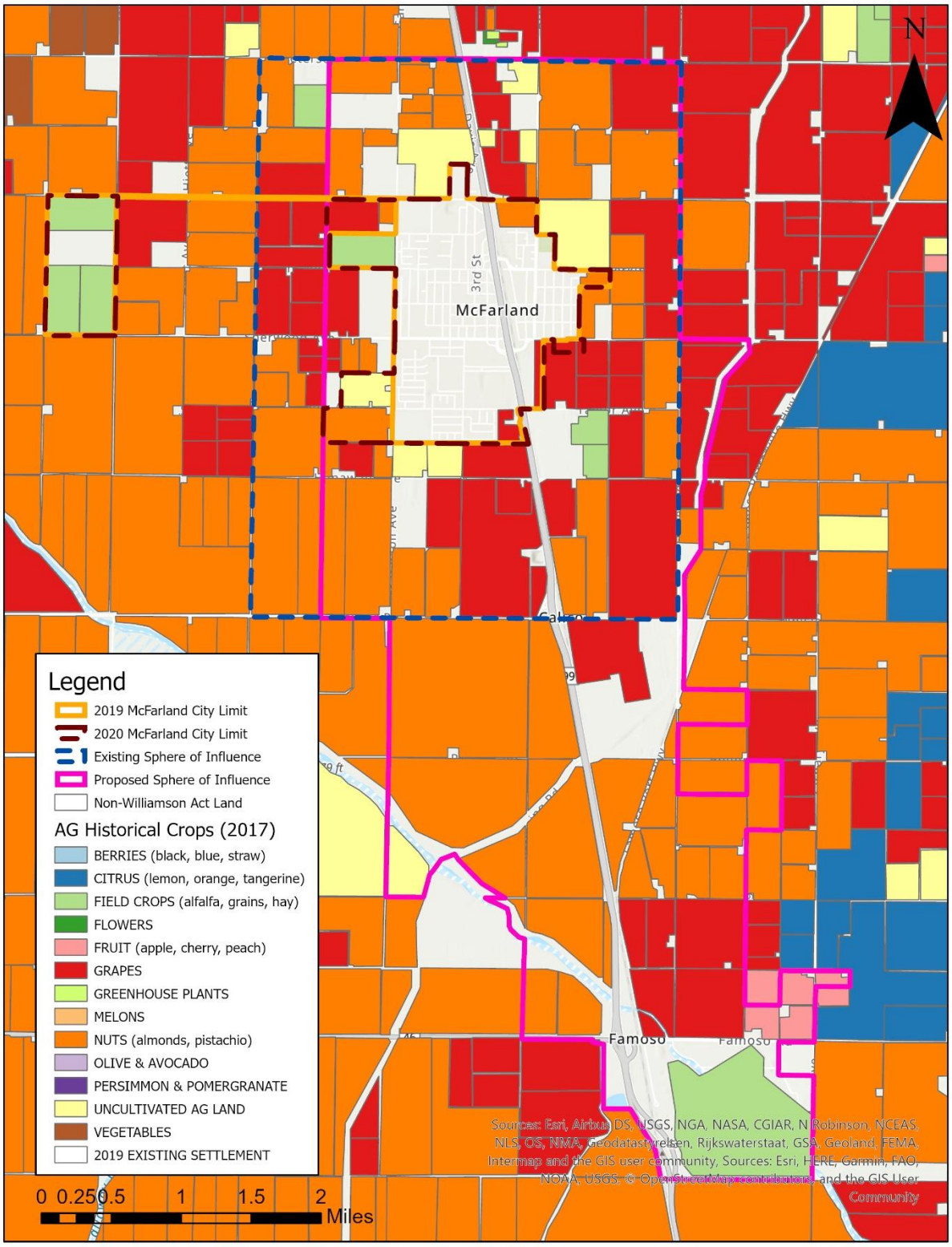
4.2.1.2 Existing and baseline Conditions

McFarland's economy is largely based on agriculture. In the past 16 years, between 50 percent and 80 percent of all jobs were in agriculture. Agriculture land is the third most common land use by acreage (24 percent) and makes up 89 percent of open space in McFarland. While any City growth is likely to encroach on agriculture lands, local regulations attempt to prevent this by prioritizing agricultural land preservation and promoting anti-sprawl land use policies.

The majority of the agriculture land in McFarland and the surrounding area is designated as "Prime Farmland" by the California Department of Conservation. This includes 55 out of 62 Williamson Act parcels within the proposed SOI. The remaining seven parcels are classified as unknown because the soil conditions in these areas remained untested or unclear as of December 2019.

Important crops in McFarland are grapes, nuts, and field crops (such as alfalfa, grains, and hay) shown in Map 4.2-1. These contribute to Kern county's $7.2 billion in crop value according to the 2018 Kern County Agricultural Crop Report. The report shows that grapes and nuts are two of the top grossing crops. The agricultural industry's importance to McFarland's economy underscores the value of preserving agricultural land.

MAP 4.2-1: 2019 MAJOR CROP TYPES



Farmland Preservation

Farmland preservation is prioritized in Kern County, advocated for by the Kern County Farm Bureau - "Promoting, protecting and strengthening Kern County's agricultural interest," (Kern County Farm Bureau, 215).

McFarland Municipal Code Chapter 17.96 And 17.98 – A-1 And A-2 Zones

The McFarland Municipal Code designates two agriculture zoning districts (A-1 and A-2) to prioritize agricultural uses above non-agricultural uses, preventing development on agricultural land and preserving adequate space for agricultural uses.

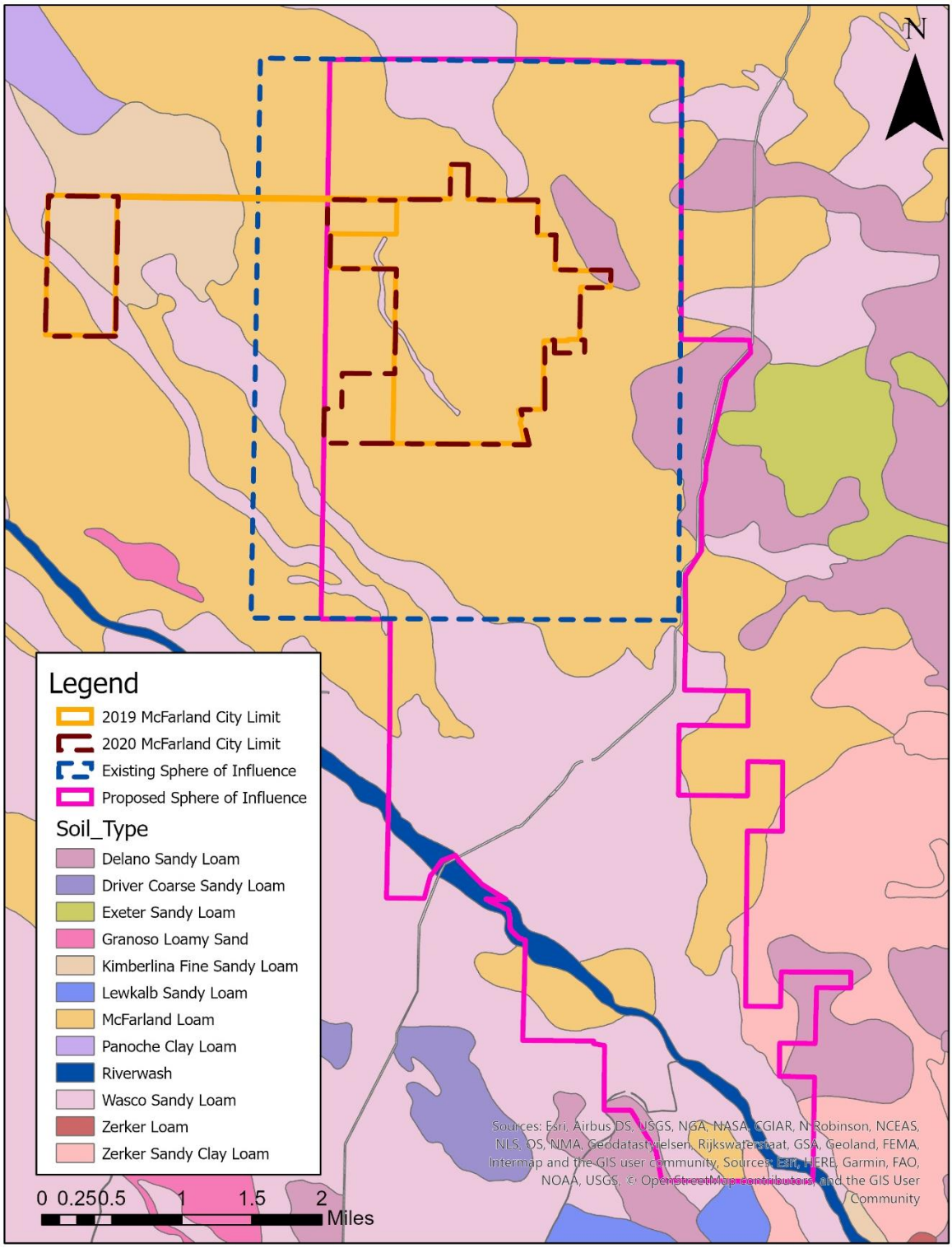
Soil Type

There are several high-quality natural soil types within McFarland's SOI that are ideal for farming. Map 4.2-2 shows the locations of the four soil types in the McFarland area, which include Wasco Sandy Loam, McFarland Loam, Delano Sandy Loam, and Kimberlina Fine Sandy Loam. Table 4.2-1 describes the characteristics of these four soil types. Out of these soil types, McFarland Loam is the most abundant soil type present in and around the City. Its nutrients increase crop strength and harvest totals. The USDA subscribes the following characteristics to McFarland Loam: moderate permeability, slightly acidic to moderately alkaline pH levels, clay content ranging from 18% to 35%, and a gravel content ranging from 0% to 5%. All these indicators benefit crop growth in the region, further supporting the need for preservation of prime agricultural lands in the City and its sphere of influence.

TABLE 4.2-1: SOIL TYPES FOUND IN MCFARLAND, CA

SOIL	DRAINAGE	RUN OFF	USES
McFarland loam	Well drained	Negligible to medium run off	Growing irrigated field, forage, and row crops
Wasco sandy loam	Well drained	Negligible to very low run off	Growing field, forage, and row crops
Kimberlina fine sandy loam	Well drained	Negligible to medium run off	Growing irrigated field, forage, and row crops
Delano sandy loam	Well drained	Medium run off	Growing irrigated field, forage, and row crops

MAP 4.2-2: USGS SOIL TYPES IN MCFARLAND



Source: Department of Agriculture

4.2.2 Standards of Significance

4.2.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), build-out of the Plan would have significant impact on the environment with respect to agricultural resources if it would:

1. 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;
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract;
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
4. Result in the loss of forest land or conversion of forest land to non-forest use;
5. 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.

.

4.2.2.2 Methodology

The City *of McFarland Background Report* (2020) and California Department of Conservation's Farmland Mapping and Monitoring Program were used to assess the potential impacts of the 2040 General Plan buildout on McFarland's agricultural resources. Specifically, this included an analysis of the potential conversion of agricultural resources due to the impacts of implementation of the proposed Plan policies and programs.

4.2.3Impact Discussion

This section discusses environmental impacts with respect to agricultural resources.

AG – 1 following mitigation, the proposed Plan would result in **less-than-significant** impacts by converting prime farmland, unique farmland, or farmland of statewide importance (farmland), to non-agricultural use.

Agricultural lands in McFarland are important in that they provide commodities that generate local jobs and income, contribute to the local character of the City, and create habitat for wildlife. While some designated urban land under temporary agricultural use will be converted to urban land uses under the Plan, overall agricultural land consumption is to be minimized. Furthermore, McFarland is committed to farmland preservation and the proposed General Plan contains goals and policy demonstrating commitment to the unnecessary consumption of farmland and support for the preservation of agricultural resources in McFarland.

Policy AG 1.1.1: Give priority to agricultural uses in agricultural areas.

Program AG 1.1.1.1: Maintain up to date mapping of lands within the City's Sphere of Influence under Williamson Act Contracts.

Program AG 1.1.1.2: Prohibit annexation of properties under Williamson Act contracts unless a Notice of Non-renewal has been filed.

Program AG 1.1.1.3: Adopt a Right-to-Farm ordinance.

Program AG 1.1.1.4: Promote education of new homebuyers and other residents identifying the potential issues of living next to active agricultural operations

Policy AG 2.1.1: Assess potential impacts of development on agricultural lands.

Program AG 2.1.1.1: Evaluate project impacts on neighboring agricultural lands when approving new developments

Program AG 2.1.1.2: Evaluate Williamson Act contracts within and near City limits and evaluate alternative soil conservation land uses on Prime Farmlands.

Program AG 2.1.1.3: Prioritize the procurement of non-Williamson Act agricultural lands for annexation.

Policy AG 6.1.1: incentivize long term agricultural use

Program AG 6.1.1.1: Maintain the urban service boundaries to protect agricultural lands at the urban fringe for continued agricultural production.

Program AG 6.1.1.2: Limit extension of urban services such as sewer beyond the urban service boundaries until deemed necessary.

Policy AG 6.2.2: Minimize the impact of residential parcels on adjacent agricultural operations

Program AG 6.2.2.1: Cluster development parcels to locate lots close to existing residences

Program AG 6.2.2.2: Use natural features such as ridge tops, creeks, and groves of trees to separate parcels from the farming areas wherever practical in areas where clustered subdivision is permitted.

Program AG 6.2.2.3: Place agricultural easements on residual farming parcels at the time that subdivisions are developed where clustered subdivision is permitted to the extent allowed by law.

Program AG 6.2.2.4: Add regulations to the development code to restrict the size and extent of non-agricultural development on agricultural lands.

Policy AG 11.1.1: Establish procedures and standards in the Development Code to distinguish those agricultural uses and activities which may be approved by administrative action and to expedite the processing of permits for agricultural and agriculture-related uses.

Applicable Regulations: Farmland Mapping And Monitoring Program (FMMP)

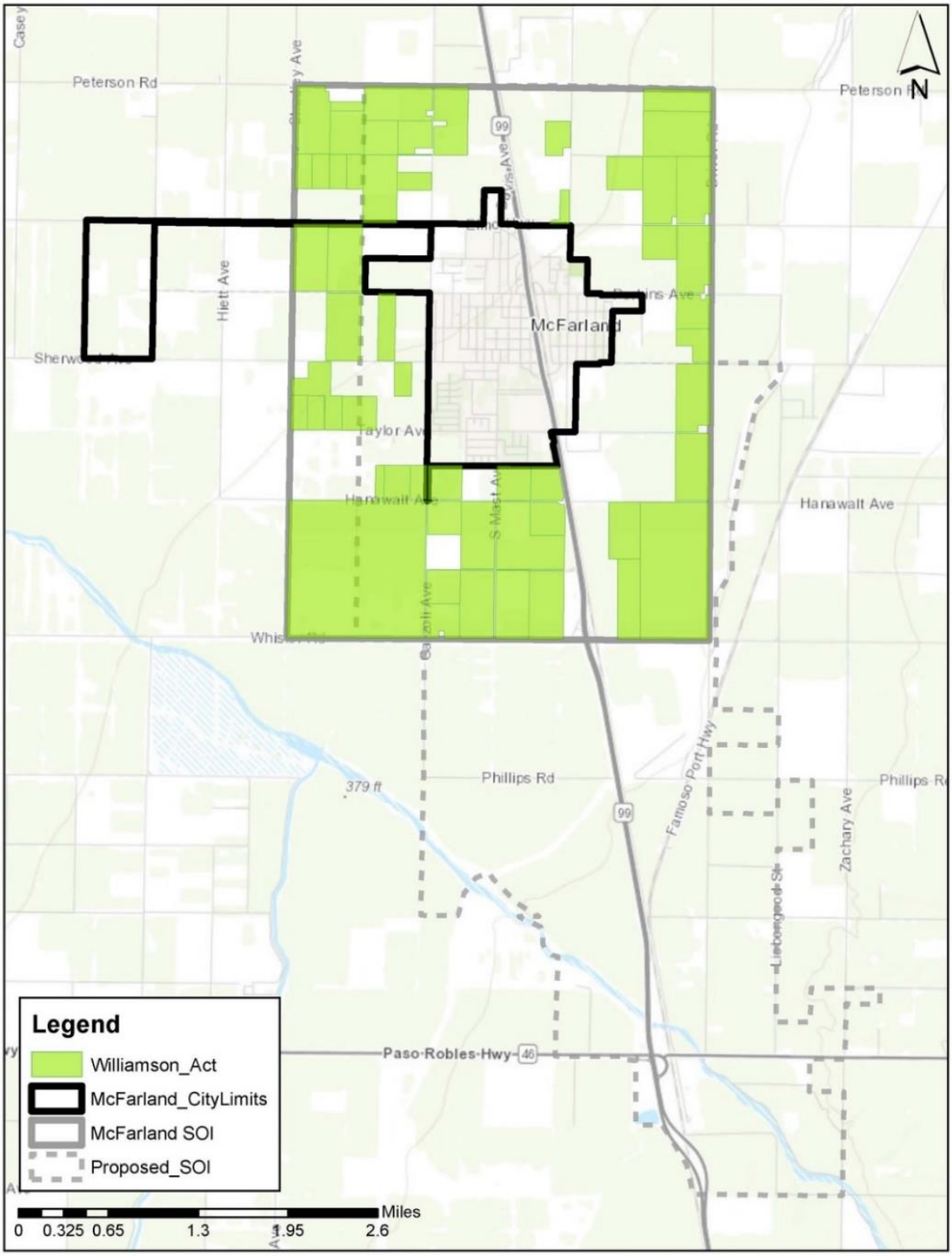
Significance Before Mitigation: Potentially Significant

Significance After Mitigation: Less than Significant

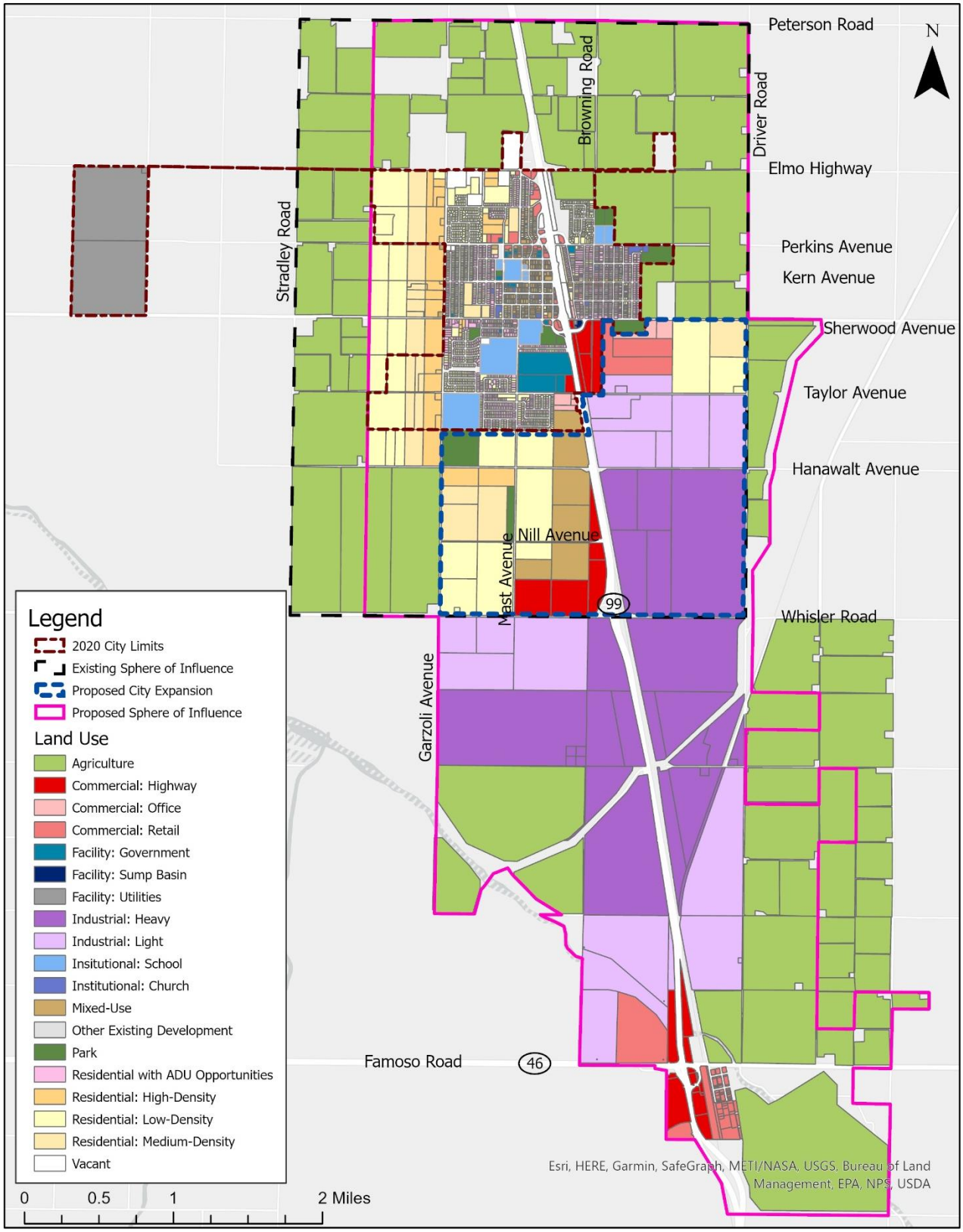
AG – 2 THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT CONFLICT WITH EXISTING ZONING FOR AGRICULTURAL USE, OR WILLIAMSON ACT CONTRACT.

McFarland recognizes the economic and cultural importance of agriculture for the community and continues to actively preserve and protect farmland, particularly, Williamson Act Parcels. Nevertheless, some Williamson parcels will inevitably be lost to housing in order to accommodate the growing population. These changes are illustrated by comparing Maps 4.2-3 and 4.2-4. Several policies are aimed at mitigating the loss of agricultural land.

MAP 4.2-3: WILLIAMSON ACT LAND IN THE MCFARLAND SPERE OF INFLUENCE



MAP 4.2-4: CONCEPTUAL LAND USE MAP



Policy AG 1.1.1: Give priority to agricultural uses in agricultural areas.

Program AG 1.1.1.1: Maintain up to date mapping of lands within the City's Sphere of Influence under Williamson Act Contracts.

Program AG 1.1.1.2: Prohibit annexation of properties under Williamson Act contracts unless a Notice of Non-renewal has been filed.

Program AG 1.1.1.3: Adopt a Right-to-Farm ordinance.

Program AG 1.1.1.4: Promote education of new homebuyers and other residents identifying the potential issues of living next to active agricultural operations

Policy AG 2.1.1: Assess potential impacts of development on agricultural lands.

Program AG 2.1.1.1: Evaluate project impacts on neighboring agricultural lands when approving new developments

Program AG 2.1.1.2: Evaluate Williamson Act contracts within and near City limits and evaluate alternative soil conservation land uses on Prime Farmlands.

Program AG 2.1.1.3: Prioritize the procurement of non-Williamson Act agricultural lands for annexation

Policy AG 6.2.2: Minimize the impact of residential parcels on adjacent agricultural operations

Program AG 6.2.2.1: Cluster development parcels to locate lots close to existing residences

Program AG 6.2.2.2: Use natural features such as ridge tops, creeks, and groves of trees to separate parcels from the farming areas wherever practical in areas where clustered subdivision is permitted.

Program AG 6.2.2.3: Place agricultural easements on residual farming parcels at the time that subdivisions are developed where clustered subdivision is permitted to the extent allowed by law.

Program AG 6.2.2.4: Add regulations to the development code to restrict the size and extent of non-agricultural development on agricultural lands.

Applicable Regulations: Williamson Act

Significance Before Mitigation: Less than significant.

AG – 3 THE PROPOSED PLAN WOULD **NOT CONFLICT** WITH EXISTING ZONING FOR, OR CAUSE OF REZONING OF, FOREST LAND (AS DEFINED IN PUBLIC RESOURCES CODE SECTION 12220(G)), TIMBERLAND (AS DEFINED BY PUBLIC RESOURCES CODE SECTION 4526), OR TIMBERLAND ZONED FOR TIMBERLAND PRODUCTION (AS DEFINED BY GOVERNMENT CODE SECTION 51104(A)).

There is no forest land, timberland, or timberland zoned for Timberland production within the City of McFarland.

Applicable Regulations: None

Significance Before Mitigation: No Impact

AG – 4 THE PROPOSED PLAN WOULD HAVE **NO IMPACT** ON THE LOSS OF FOREST LAND TO NON-FOREST USE.

There is no forest land within the City of McFarland.

Applicable Regulations: None

Significance Before Mitigation: No impact

AG – 5 FOLLOWING MITIGATION, THE PROPOSED PLAN WOULD RESULT IN **LESS-THAN-SIGNIFICANT** IMPACTS THAT 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.

Agricultural resources are directly threatened by urban development as well as urban growth. McFarland is committed to preserving its agricultural resources; however, buildout of the proposed Plan may impact the agricultural environment by changing the activities occurring on adjacent properties. With the proposed change in the City's sphere of influence (SOI), land for potential future growth in the old SOI would return to agricultural use west of the City as the City seeks to expand its SOI toward the south along the Highway 99 corridor to foster economic growth. This would cause the overall impact to be less than significant. The proposed Plan has outlined a number of objectives, policies, and programs that will help guide land use development and minimize these cumulative impacts. Applicable General Plan policies and actions in support the preservation of agricultural resources in McFarland are listed below.

Policy AG 1.1.1: Give priority to agricultural uses in agricultural areas.

Program AG 1.1.1.1: Maintain up to date mapping of lands within the City's Sphere of Influence under Williamson Act Contracts.

Program AG 1.1.1.2: Prohibit annexation of properties under Williamson Act contracts unless a Notice of Non-renewal has been filed.

Program AG 1.1.1.3: Adopt a Right-to-Farm ordinance.

Program AG 1.1.1.4: Promote education of new homebuyers and other residents identifying the potential issues of living next to active agricultural operations

Policy AG 1.2.1: Encourage economically sound development of natural resources.

Program AG 1.2.1.1: Protect open space through Williamson Act and conservation easements, prioritizing areas for continued production by 2025, and committing to easements by 2030.

Program AG 1.2.1.2: Conduct a facilities condition assessment to help prioritize the needs for passive open space.

Program AG 1.2.1.3: Encourage prioritization in completion of the most cost-effective improvements.

Policy AG 2.1.1: Assess potential impacts of development on agricultural lands.

Program AG 2.1.1.1: Evaluate project impacts on neighboring agricultural lands when approving new developments

Program AG 2.1.1.2: Evaluate Williamson Act contracts within and near City limits and evaluate alternative soil conservation land uses on Prime Farmlands.

Program AG 2.1.1.3: Prioritize the procurement of non-Williamson Act agricultural lands for annexation.

Policy AG 3.1.4: Protect open space wherever possible.

Program AG 3.1.4.1: Preserve open space in agricultural production and conservation easements where possible.

Program AG 3.1.4.2: Encourage preservation of open space through Williamson Act or other tax-based incentive programs designed to reduce property tax burden on productive farmers.

Program AG 3.1.4.3: Encourage adoption of open space easements to reduce risk and provide a public benefit where safety concerns such as floodable area and pipeline and transmission lines are present.

Policy AG 3.1.5: Designate passive open space of agricultural lands through direct dedication, in lieu fees, or similar measures during the development process.

Program AG 3.1.5.1: Encourage open space dedication commensurate with the number of units proposed either through direct dedication or in lieu fees for major subdivisions of 4 or more parcels.

Program AG 3.1.5.2: Encourage access easement dedication or in lieu fees for minor subdivisions of 3 parcels or fewer.

Program AG 3.1.5.3: Develop a capital improvement process for funding new passive open spaces.

Policy AG 6.2.2: Minimize the impact of residential parcels on adjacent agricultural operations

Program AG 6.2.2.1: Cluster development parcels to locate lots close to existing residences

Program AG 6.2.2.2: Use natural features such as ridge tops, creeks, and groves of trees to separate parcels from the farming areas wherever practical in areas where clustered subdivision is permitted.

Program AG 6.2.2.3: Place agricultural easements on residual farming parcels at the time that subdivisions are developed where clustered subdivision is permitted to the extent allowed by law.

Program AG 6.2.2.4: Add regulations to the development code to restrict the size and extent of non-agricultural development on agricultural lands.

Policy AG 7.2.1: Favor protection of the maximum amount of farmable land with buffers

Program AG 7.2.1.1: Encourage the establishment of physical separation of 100 feet to 200 feet at the interfaces of agricultural and residential land uses using topographic features, groves of trees, water courses, landscaped berms, or similar features in creating buffers.

Applicable Regulations: None

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

4.2.4 Summary of Potential Impacts and Mitigation Measures

The amount of growth to be achieved through the implementation of the General Plan in the City of McFarland will necessitate the conversion of agricultural lands to urban use. However, with the proposed change in the City's sphere of influence (SOI), land for potential future growth in the old SOI would return to agricultural use west of the City as the City seeks to expand its SOI toward the south along the Highway 99 corridor to foster economic growth. The land swap would make the effect less than significant.

AG – 1 The proposed Plan would result in potentially significant conflict with Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use

MITIGATION MEASURE AG-1A:

Prohibit annexation of properties under Williamson Act contracts unless a notice of Nonrenewal

has been filed.

MITIGATION MEASURE AG-1B:

Continue to implement a Right-to-Farm ordinance.

Significance After Mitigation: Less than significant

AG – 5 The proposed Plan would result in potentially significant conflict Involving 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

MITIGATION MEASURE AG-5A:

Implement Mitigation Measure AG-1a: Prohibit Annexation of properties under Williamson Act contracts unless a notice of Non-renewal has been filed.

Significance After Mitigation: Less than significant

4.2.5 REFERENCES

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4.3 Air Quality

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Conflict or obstruct implementation of the applicable air quality?			**X**	
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			**X**	
3. Expose sensitive receptors to substantial pollutant concentrations?		X		
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		X		

4.3.1 Environmental Setting

This section discusses the environmental setting regarding the air quality of the City of McFarland.

4.3.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the Air Quality element and potential impacts of the proposed Plan.

Federal Regulations

The Clean Air Act

The Clean Air Act (CAA) passed into legislation in 1963 and serves as the main federal legislation regulating air quality standards in the U.S. The legislation supports the establishment of National Ambient Air Quality Standards (NAAQS) under the guidance of the United States Environmental Protection Agency. The NAAQS regulates six "criteria pollutants" which are of great environmental and public health concern. The regulation protects "sensitive receptors" which are described as persons such as children, the elderly, or people weakened by disease or illness who are more susceptible to harm from these criteria pollutants. While still harmful, adults are often able to withstand occasional exposure to criteria pollution in concentrations higher than those set by the NAAQS. CAA allows states to adopt more stringent air quality standards that are pertinent in the state of California which established the California Clean Air Act.

Environmental Protection Agency

In 2005, the EPA established the Clean Air Ozone Rules of the CAA, creating a framework to reduce ground level ozone pollution. The rule also worked to replace the NAAQS one hour exposure standard with a longer eight-hour standard. This new ruling eliminated some key standards within the NAAQS including one-hour transportation conformity, one-hour minimum thresholds for general conformity, Section 185 fees associated with non-compliance of the 1-hour standard.

National Ambient Air Quality Standards

Displayed in Table 4.3-1 are the National Ambient Air Quality Standards for six pollutants that are harmful to public health and the environment. The EPA identifies two categories of standards. The primary standard provides public health protection, with an emphasis on protecting the health of vulnerable populations, such as children, the elderly, and asthmatics. The second standard provides protection against damage to crops, vegetation, animals, and buildings. Units of measure for the standards are recorded in parts per million (ppm) by volume, and micrograms per cubic meter of air (µg/m3).

TABLE 4.3-1: NATIONAL AMBIENT AIR QUALITY STANDARDS

POLLUTANT	PRIMARY/ SECONDARY	AVERAGING TIME	LEVEL	FORM
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
Lead (Pb)	Primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen dioxide (NO_2)	Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	53 ppb (2)	Annual mean
Ozone (O_3)	Primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM) PM 2.5	Primary	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m^3	98th percentiles, averaged over 3 years
PM 10	Primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year
Sulfur Dioxide (SO_2)	Primary	1 hour	75 ppm (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3 hours		Not to be exceeded more than once per year

Source: Environmental Protection Agency, 2016

State Regulations

California Clean Air Act

The California legislature passed the California Clean Air (CCAA) in 1988, establishing the California Air Resources Board (CARB). The Air Resources Board has authority to set standards for and regulate ambient air quality standards including standards for four new air pollutants known as "hazardous air contaminants," as well as those established under the Federal CAA. The CCAA also establishes CARB with the authority to implement goals, policies and plans that support compliance with the California Ambient Air Quality Standards.

The Toxic Air Contaminant Identification and Control act (AB 1807, Tanner 1983) and The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connely 1987)

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) and the supplementing Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) passed into law in 1983 and 1987, respectively. The intention of these laws is to address air quality issues concerning industrial emissions of toxic air contaminants (TAC) within California. Under the legislation, qualifying facilities are required to report to the CARB on toxic air contaminants, potential health risk and take steps to notify nearby residents of potential risks when necessary. The information in these reports allows local officials to adequately plan and work towards air quality standards compliance, including the addition SB 1731 in 1992, which requires facilities posing a significant local health risk to establish and implement a risk management plan.

California Ambient Air Quality Standards

These standards exist to designate a length of time and maximum level of exposure to pollutants that are in congruence with public welfare and human health. Shown in Table 4.3-2 are the ambient air quality standards for the State of California.

TABLE 4.3-2: CALIFORNIA AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	CONCENTRATION	METHOD
Ozone (O_3)[8]	1-hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry
	8-hour	0.07 ppm (137 µg/m^3)	Gravimetric or Beta Attenuation
Respirable Particulate Matter (PM 10)[9]	24-hour	50 µg/m^3	Gravimetric or Beta Attenuation

POLLUTANT	AVERAGING TIME	CONCENTRATION	METHOD
	Annual Arithmetic Mean	20 µg/m^3	
Fine Particulate Matter (PM 2.5)[9]	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry
	8-hour	9.0 ppm (7 mg/m^3)	
Nitrogen Dioxide (NO_2)[10]	1-hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm (665 µg/m^3)	Ultraviolet Florescence
	24-hour	0.04 ppm (105 µg/m^3)	
Lead[12,13]	30-Day Average	1.5 µg/m^3	Atomic Absorption
Visibility Reducing Particles[14]	8-hour	-	Beta Attenuation and Transmittance through Filter Tape
Sulfates	24-hour	25 µg/m^3	Ion Chromatography
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	Ultraviolet Florescence
Vinyl Chloride[12]	24-hour	0.01 ppm (26 µg/m^3)	Gas Chromatography

Source: California Air Resources Board, 2019

AB 118 Alternative Fuels and Vehicle Technologies: Funding Programs

This bill created the Clean Transportation Program through the California Energy Commission. The standard aims to develop and deploy renewable fuel alternatives and advanced transportation technologies as a strategy for reaching the State's climate goals.

SB 1275 Vehicle Retirement and Replacement: Charge Ahead California Initiative

SB 1275 requires an update to existing law regarding the enhanced fleet modernization program for the retirement of vehicles qualifying as high polluting. SB 1275 adds an update to the mobility option in this program that compensation for high polluting vehicles can be no less than $2,500 and it ensures low-income vehicle owners can participate in the program. Authorized by the state board, they can raise the amount of compensation as a strategy for maximizing the benefits of this air quality program.

SB 1204 California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program

Funding provided the State's cap and trade program will be used to create the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program. Its intended purpose is to fund zero and near-zero emission trucks, buses, and off-road vehicles and specified equipment technologies. Priority will be given to projects in disadvantaged communities.

California Code of Regulations Sections 6690 to 6692 of Title 3

These codes act as guidelines for the use of pesticides in proximity to schools and distance restrictions for specific operations of applying pesticides. These restrictions apply to aircraft, air-blast sprayers, sprinklers, and fumigant applicators. There must be a ¼ mile distance restriction for these uses and there is a 25-foot distance restriction when using ground-rig sprayers, field soil injection equipment, and other application equipment that is not specified. Additionally, there are annual notification requirements that must be posted in advance of the use of pesticides following the above-mentioned standards in spaces where pesticides are being applied.

4.3.1.2 Existing and baseline Conditions

Air quality is the measure of air pollution against local climate and geographical factors. The City of McFarland is in the San Joaquin Valley Air Basin, which is defined by the Sierra Nevada mountains to the east, the coastal mountain ranges to the west, and the Tehachapi Mountains to the south. This topography forms a sort of bowl, and together with wind and weather patterns, stagnates pollutants in the southern half of the San Joaquin Valley. Kern County contains two air basins: San Joaquin Valley and Indian Wells Valley. Both air basins are in non-attainment for different sources of pollutants. McFarland lies in the San Joaquin Valley portion of Kern County, which is a highly pollution-burdened area.

Most air pollution in the San Joaquin Valley stems from locally generated pollutants. Agricultural activity is a major contributor to air pollution, and the Central Valley is known around the world for its agricultural production. Air pollution in the valley is also exacerbated by winds through the Altamont Pass, which transport pollutants into the region from the neighboring San Francisco Bay Area Air Basin. To make

matters worse, the valley regularly experiences inversion layers that hold pollutants in the region over periods of several days, creating stagnant, polluted air that has adverse effects on community members' quality of life.

Air Quality Monitoring

The City of McFarland falls within the SJVAPCD, which is the entity responsible for regulating and monitoring air quality valley wide. The SJVAPCD works to help the valley attain the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS).

Ozone pollution data for McFarland is from the Shafter air monitoring station, approximately 17 miles southwest of McFarland. The nearest particulate monitoring station is in Bakersfield (California Avenue), which is close to 26 miles southeast of McFarland. The San Joaquin Valley is in attainment with the federal PM 10 standard, but not with the federal PM 2.5 standard, and it is not in attainment with state PM 10 or PM 2.5 standards. Also, the Valley is not in attainment with federal nor with state ozone standards.

4.3.2 Standards of Significance

4.3.2.1 CEQA Thresholds

Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018) provides thresholds of significance for air quality impacts created by projects or programs. The proposed plan would have a significant effect on the environment with respect to air quality if it would:

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

4.3.2.2 Methodology

Air quality impacts should be analyzed using the current guidelines or procedures specified by the local air district or the Air Resources Board. The San Joaquin Valley Air Pollution Control District (SJVPCD) publishes CEQA Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). The GAMAQI includes methodology and thresholds for criteria air pollutant impacts and community health risk for plan-level and project-level analyses.

Table 4.3-3 shows the attainment status of pollutants in the Valley highlighted in the GAMAQI and highlights those criteria pollutants of special concern and that are managed under State Implementation Programs (SIP) outlined in Section 4.3.1.1.

TABLE 4.3-3: SAN JOAQUIN VALLEY ATTAINMENT STATUS

POLLUTANT	DESIGNATION/CLASSIFICATION	
	Federal Standards	State Standards
Ozone - 1 hour	Revoked 2005	Nonattainment/Severe
Ozone - 8 hour	Nonattainment/Extreme	Nonattainment
PM 10	Attainment	Nonattainment
PM 2.5	Nonattainment/Moderate	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Monoxide	Attainment/Unclassified	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Source: SJVAPCD, 2015a

4.3.3IMPACT DISCUSSION

This section presents the impact analysis of the growth scenarios included in the proposed Plan and the Plan's potential effect on air quality standards within the Air Basin. The impacts discussed are based on the threshold categories for air quality impacts included in Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018).

AQ – 1 THE PROPOSED PLAN WILL IMPOSE A LESS-THAN-SIGNIFICANT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

Since McFarland, like the rest of the San Joaquin Valley area is in attainment with the federal PM 10 standard, but not with the federal PM 2.5 standard, the area is not in attainment with state PM 10 or PM 2.5 standards, and the area is not in attainment with federal nor with state ozone standards, the Plan has policies to address air quality. Besides, Plan features promote contiguous growth with intensification of development, the use of alternatives to the auto like walking, biking, and transit.

Policy AQ 1.1.1: Coordinate with the San Joaquin Valley Air Pollution Control District ("Air District") to identify air pollution reduction progress and key contributors to air pollution.

Program AQ 1.1.1.1: Work with the Air District to build an air monitoring station in McFarland.

Program AQ 1.1.1.2: Collaborate with the Air District to develop a website to report live air quality monitoring data.

Policy AQ 1.2.1: Meet attainment status for criteria pollutants according to National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality standards (SAAQS).

Program AQ 1.2.1.3: Comply with state diesel exhaust standards to reduce pollutants for mobile and agricultural sources.

Applicable Regulations:

California Clean Air Act

National Ambient Air Quality Standards

State Ambient Air Quality Standards

Significance Before Mitigation: Less than significant

AQ – 2 THE PROPOSED PLAN WILL HAVE A LESS-THAN-SIGNIFICANT IMPACT THAT WOULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE PROJECT REGION IS NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD .

The SJVAPCD has published two state implementation plans (SIPs) which address ozone and particulate matter, for which the Basin fails to meet attainment standards.

General Plans are typically considered consistent with SIPs if they do not increase population or VMT above that projected in the Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). The proposed Plan does not exceed these growth assumptions.

The SJVAPCD also published a CEQA assistance document, the "Guidance for Assessing and Mitigating Air Quality Impacts" which provides specific mitigation measures to be applied to projects in the Basin. Projects in the City, such as subdivisions or the construction of large, big-box stores will undergo project level CEQA review and are subject to the provisions of the QAMAQI. In addition, the proposed Plan contains the following policies and actions that relate to inter-agency coordination, particulate matter, and the production of ozone.

Policy AQ 1.4.2: Establish an urban forestry program to improve air quality by requiring new development and street resurfacing plans to include street and shade trees.

Policy AQ 1.4.3: Minimize health risks from industrial toxic or hazardous air pollutant emissions.

Policy AQ 2.1.1: Conserve and reduce energy use.

Program AQ 2.1.1.1: Develop energy conservation opportunities.
Program AQ 2.1.1.2: Establish energy conservation requirements for development (e.g., energy efficient light bulbs).
Program AQ 2.1.1.3: Apply neighborhood conservation strategies such as code enforcement and building rehabilitation.

Policy AQ 2.1.4: Reduce vehicle emissions.

Program AQ 2.1.4.1: Establish City transit options in collaboration with Kern County Transit.

Program AQ 2.1.4.2: Work with Kern County Transit to increase regional bus services for McFarland.
Program AQ 2.1.4.3: Improve existing and develop new pedestrian and bicycle infrastructure.
Program AQ 2.1.4.4: Develop guidelines to implement alternative fuel and electrical charging stations for commercial and industrial developments.

Applicable Regulations: California Clean Air Act

Significance Before Mitigation: Less than significant

AQ – 3 FOLLOWING MITIGATION, THE PROPOSED PLAN WILL HAVE A LESS-THAN-SIGNIFICANT IMPACT IN EXPOSING SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

The proposed Plan would contribute to the existing violation of several air quality standards or contribute to an existing or projected air quality violation; however, the air basin covers a large region and includes many large agricultural operations and major urban areas including the City of Fresno. The proposed Plan includes several policies and actions that will help to mitigate future air pollutant emissions and protect sensitive receptors such as schools, parks, nursing homes, or health facilities.

Policy AQ 1.2.1: Meet attainment status for criteria pollutants according to National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality standards (SAAQS).

Program AQ 1.2.1.1: Mandate the use of cover crops to reduce particulates from agricultural operations.

Program AQ 1.2.1.2: Mandate the use of scrubbers to capture pollutants in industrial operations.

Program AQ 1.2.1.3: Comply with state diesel exhaust standards to reduce pollutants for mobile and agricultural sources.

Program AQ 1.2.1.4: Mandate dust mitigation tactics in all construction operations.

Policy AQ 1.4.1: Make the most efficient use of public resources to create a healthier environment.

Program AQ 1.4.1.1: Develop coordinated land use and transportation plans to help meet federal, state, and local air quality requirements.
Program AQ 1.4.1.2: Work with Caltrans and the Regional Transportation Planning Agency to minimize the air quality impacts of large-scale transportation projects.
Program AQ 1.4.1.3: Encourage submission of development projects to the Air District for CEQA comments and review of air quality analysis.
Program AQ 1.4.1.4: Determine project air quality impacts using analysis methods and significance thresholds recommended by the Air District.

Policy AQ 1.4.2: Establish an urban forestry program to improve air quality by requiring new development and street resurfacing plans to include street and shade trees.

Program AQ 1.4.2.1: Coordinate with local non-profits and seek grants from state and national organizations to fund tree planting for air quality and other benefits.

Policy AQ 1.4.3: Minimize health risks from industrial toxic or hazardous air pollutant emissions.

Program AQ 1.4.3.1: Establish buffers between heavy industrial development

Policy AQ 2.1.1: Conserve and reduce energy use.

Program AQ 2.1.1.1: Develop energy conservation opportunities.

Program AQ 2.1.1.2: Establish energy conservation requirements for development (e.g., energy efficient light bulbs).

Program AQ 2.1.1.3: Apply neighborhood conservation strategies such as code enforcement and building rehabilitation.

Policy AQ 2.1.2: Develop renewable energy.

Program AQ 2.1.2.1: Invest in sources of renewable energy

Program AQ 2.1.2.2: Join a Community Choice Aggregation (CCA) program to create investment opportunities in local renewable power production.

Program AQ 2.1.2.3: Promote biogas from agricultural bi-products.

Policy AQ 2.1.4: Reduce vehicle emissions.

Program AQ 2.1.4.1: Establish City transit options in collaboration with Kern County Transit.

Program AQ 2.1.4.2: Work with Kern County Transit to increase regional bus services for McFarland.

Program AQ 2.1.4.3: Improve existing and develop new pedestrian and bicycle infrastructure.

Program AQ 2.1.4.4: Develop guidelines to implement alternative fuel and electrical charging stations for commercial and industrial developments

Policy AQ 2.1.5: Prioritize mixed-use and walkable neighborhoods in future developments.

Program AQ 2.1.5.1: Streamline permitting processes for mixed-use and walkable development projects.

Applicable Regulations:

California Clean Air Act

National Ambient Air Quality Standards

State Ambient Air Quality Standards

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

AQ – 4 FOLLOWING MITIGATION, THE PROPOSED PLAN WILL HAVE A LESS-THAN-SIGNIFICANT IMPACT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE

Considering the small size and rural location of the City of McFarland and the separation of incompatible uses, the proposed Plan will not have a significant impact on the exposure of substantial numbers of people to emissions. The following policies and programs illustrate the proposed Plan's mitigation of pollutant air impacts on populations.

Policy AQ 1.4.3: Minimize health risks from industrial toxic or hazardous air pollutant emissions.

Program AQ 1.4.3.1: Establish buffers between heavy industrial development projects and residential land uses.

Policy AQ 2.1.4: Reduce vehicle emissions.

Policy AG 2.3.1: Research the acquisition of land for carbon sequestration

Program AG 2.3.1.1: Work with subject-matter experts to analyze carbon sequestration potential and seek funding for a pilot program.

Program AG 2.3.1.2: Assist farmers with procuring anaerobic digesters using state cap-and-trade funding to develop new sources of compost for carbon sequestration efforts.

Applicable Regulations: California Clean Air Act

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

4.3.4 Summary of Potential Impacts and Mitigation Measures

Given condition of air quality in and around the City of McFarland as well as attainment status for air quality in the San Joaquin Valley Air Basin, the proposed goals, policies, and programs in the City of McFarland 2040 General Plan will have a less than significant impact on local air quality and in the City. The goals, policies and programs included in the Plan related air quality, specifically those included in the Air Quality elements, can mitigate potentially significant air quality impacts during the implementation of the General Plan.

AQ – 3 The proposed Plan would result in potentially significant impact in exposing sensitive receptors to substantial pollutant concentrations

MITIGATION MEASURE AQ-3A:

Avoid siting of new substantial emission sources within CARB recommended screening distances of sensitive receptors.

Significance After Mitigation: Less than significant

AQ – 4 The proposed Plan would result in potentially significant impact in other emissions (such as those leading to odors) adversely affecting a substantial number of people

MITIGATION MEASURE AQ-4A:

Update zoning to meet screening distances.

Significance After Mitigation: Less than significant

4.3.5 References

Association of Environmental Planners, 2016 California Environmental Quality Act (CEQA) Statute and Guidelines

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4.4 Biological Resources

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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?		X		
2. 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?				X
3. 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?			X	
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident			X	

	or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	
5.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	x
6.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	x

4.4.1 Environmental Setting

This section discusses the environmental setting regarding biological resources in the City of McFarland.

4.4.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the biological resources' potential impacts of the proposed Plan.

Federal Regulation

Clean Water Act

The Clean Water Act establishes the permit program to regulate the discharge of fill material into navigable waters of the United States. Section 401 (Certification) allows the Regional Water Quality Control Board to regulate any proposed federally permitted activity that may affect water quality.

Environmental Protection Agency

Federal Clean Water Act (FCWA) establishes a structure for regulating the discharge of pollutants into waters of the United States, which is monitored by the EPA, U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife, and the National Marine Fisheries Service. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into waters of the U.S., including wetlands, which is the location of many threatened and endangered species. The USACE is responsible for enforcing Section 404 and approving permits and has a policy of "no net loss" of wetlands. Activities that are regulated under

section 404 must show that steps have been taken to avoid impacts to wetlands, streams, and other aquatic resources. States are also able to approve or deny federal water permits or attach conditions to them under Section 401 of the CWA.

Federal Endangered Species Act (ESA)

The Act was passed to protect and recover imperiled species and the ecosystems they depend on. The USFWS has primary responsibility for terrestrial and freshwater species and the National Marine Fisheries Service (NMFS) has responsibility for marine wildlife. Section 4 of the act requires species to be listed as "endangered," meaning in danger of extinction through most of its range, or "threatened," meaning likely to become endangered. Section 7 requires Federal Agencies to consult with USFWS and NMFS if a project will affect a listed species.

Section 9 and 10 of the ESA regulate the take of a listed species. Under section 9, it is unlawful for any person, private or public, to take endangered species (take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct). Harm also includes altering habitat necessary for the species survival. Section 10 authorizes FWS, National Oceanic and Atmospheric Administration, and NMFS to authorize a permit allowing the take a species. A Habitat Conservation plan (HCP) must be prepared to show that the effects of the listed species will be minimized and mitigated for a take permit to be issued.

Migratory Bird Treaty Act, 1918

This act makes it illegal for anyone to, "take, possess, import, export, transport, sell, purchase, or barter any migratory bird or the parts, nests, eggs of such as bird except under the terms of a valid permit" (U.S. Fish and Wildlife Service, 1918). Migrating birds are common throughout California in the fall and spring.

Bald And Golden Eagle Protection Act

Prohibits anyone without a permit issued by the Secretary of the Interior from "taking" these eagles, including their parts, eggs, or nests. The definition of take is standard throughout dealing with sensitive species, meaning an action that agitates or bothers an eagle, whether directly or indirectly, is unlawful.

State Standards

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act seeks to protect water quality and beneficial uses in the State of California. The Act transfers authority of water quality to regional water boards to adopt water quality control plans within their region.

California Endangered Species Act (CESA)

CESA states that, "native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved."

CESA prohibits the taking of any species determined to be threatened or endangered (Code 2080). CDFW Code 2080(b) details criteria to be met to obtain a take permit, and 2080.1 describes consistency determinations for applicants that fall under FESA and CESA. CDFW recommends that CESA takes precedence over the Federal regulation since California regulations are stricter. All threatened or endangered species in McFarland are protected by this act.

Native Plan Protection Act of 1977

California Fish and Game Code 1900 states that the purpose of the act is to, "preserve, protect, and enhance endangered or rare native plants of this state." The act prohibits the taking, possessing, or selling any threatened, native plants as defined by the code. The act is described in Codes 1900-1913.

California Fish and Game code 3503

This code makes is unlawful to take or injure any birds the fall into the category of birds of prey (hawks, falcons, raptors), or destroy the nest or eggs of any such birds except as otherwise provided in the code.

California Environmental Quality Act (CEQA)

CEQA is the state version of the National Environmental Policy Act and applies to all discretionary projects approved by a public agency. CEQA makes all the environmental impacts of a potential projects available for public review. Also, it has the projects minimize environmental impacts through project alternatives and mitigation measures. All of the projects within the City of McFarland are required to comply with CEQA.

Local Standards

Central California Regional Water Quality Board (CCRWQB)

The Central California Regional Water Quality Board (CCRWQB) monitors all water sources and systems within its boundaries. The CCRWQB is responsible for creating a basin plan, which is the master water quality control planning document. The plan was adopted by the State Water Resources Control Board as well as the EPA. The CCRWQB also regulates agricultural land and other pollution sources.

4.4.1.2 Existing and baseline Conditions

Forests

No naturally occurring vegetation communities, timber resources, or forest resources exist within McFarland or its planned annexation area. McFarland is largely surrounded by farmland. However, trees

in the City's boundaries can provide habitat for wildlife, sequester carbon from the atmosphere, reduce building heating and cooling loads by providing shade, and moderating temperatures and humidity levels.

Rivers and Other Waters

There are no bodies of water in McFarland that would qualify as "water of the United States". McFarland lies in a very flat portion of Tulare-Buena Vista, with a gradual south to north elevation gradient. Water quality in and around the City is regulated by the Central Valley Regional Water Quality Control Board. However, there are no "waters of the Sates" within McFarland. Agricultural stock ponds may qualify as a "water of the State" and fall under the jurisdiction of the Regional Water Quality Control Board and California Department of Fish and Wildlife if they support emergent and/or riparian vegetation, or if they are being used for water quality purposes.

The nearest body of water to McFarland is Lake Woollomes, located approximately 3.5 miles to the northeast of the City. The lake is owned by the Bureau of Reclamation and leased by the Kern County Parks Division. It is used as an equalizing reservoir for the Friant-Kern Canal. The lake and its 4 miles of shoreline cover approximately 300 acres.

Harbors and Fisheries

There are no harbors or fisheries within McFarland or its planned annexation area. The nearest body of water used for fishing is Lake Woollomes located outside of City limits. Lake uses include non-motorized boating opportunities and year-round recreational fishing for bass, catfish, and crappie.

Wildlife

In the City of McFarland 1991 General Plan, the community expressed interest in wildlife conservation related to species within the region. Since 1991, four species have been on-and-off the U.S. Fish and Wildlife Service (USFWS) list of threatened or endangered species. These species include the Swainson's hawk (*Buteo swainsoni),* Burrowing owl (*Athene cunicularia),* Tricolored Blackbird (*Agelaius tricolor)* and the San Joaquin Kit Fox (*Vulpes macrotis mutica*). The endangered title as formally declared by the USFWS indicates that this species is in danger throughout all of significant portions of its range. The USFWS's two primary goals are to:

1. Protect threatened and endangered species, and then pursue their recovery and,
2. Preserve candidate species and species-at-risk so that listing under the Endangered Species Act (ESA) is not necessary.

In 1971, the Environmental Protection Agency designated the San Joaquin Kit Fox as an endangered species. Because Kit Fox movement within and around McFarland is possible, it is in the best interest of the species if well-suited areas are accommodating for Kit Fox habitats. According to the USFWS, there are numerous locations in and around McFarland that are potential candidates for Kit Fox habitat

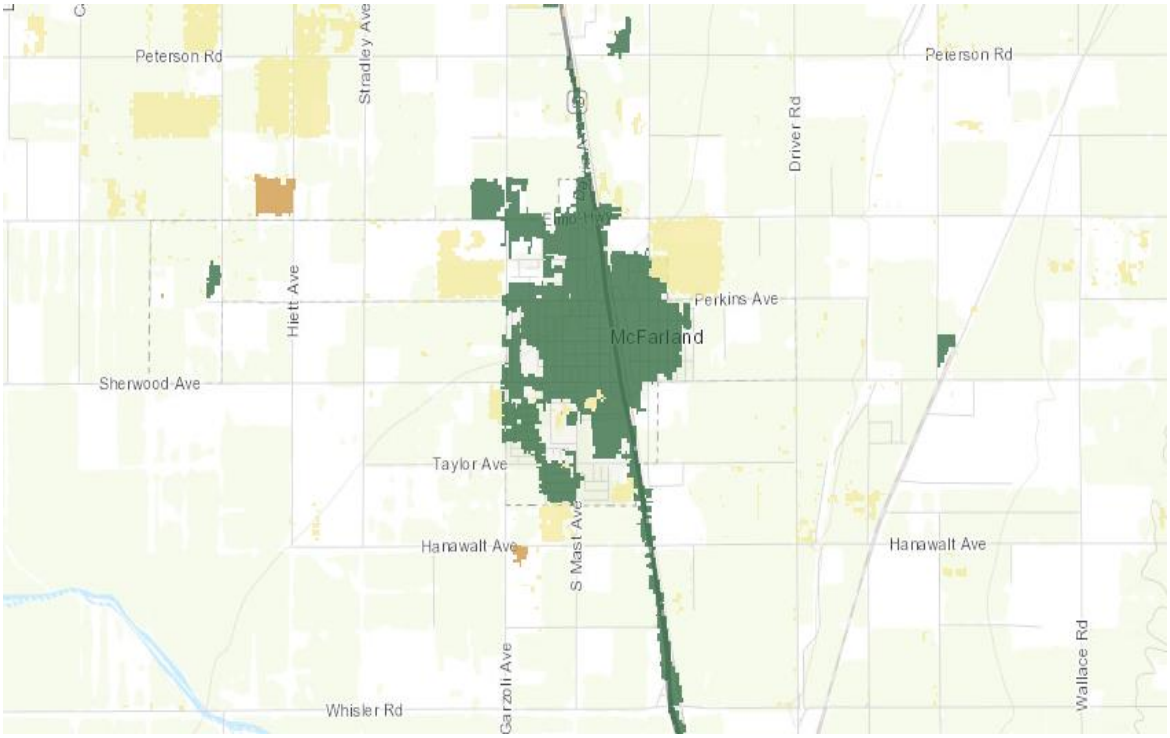
accommodation. The highlighted areas in brown on Map 4.4-2 indicate medium habitat suitability, where areas have a fair capacity to provide breeding, foraging, and cover for Kit Foxes. High-quality locations for habitat development do not exist in McFarland, nor do low-level locations. If habitats were to be developed on-site, it would be ideal to develop them on the exterior perimeter of McFarland as opposed to the interior denser urban areas. There is likely a greater risk for Kit Fox in these areas.

MAP 4.4-1: SAN JOAQUIN KIT FOX HABITAT SUITABILITY IN MCFARLAND

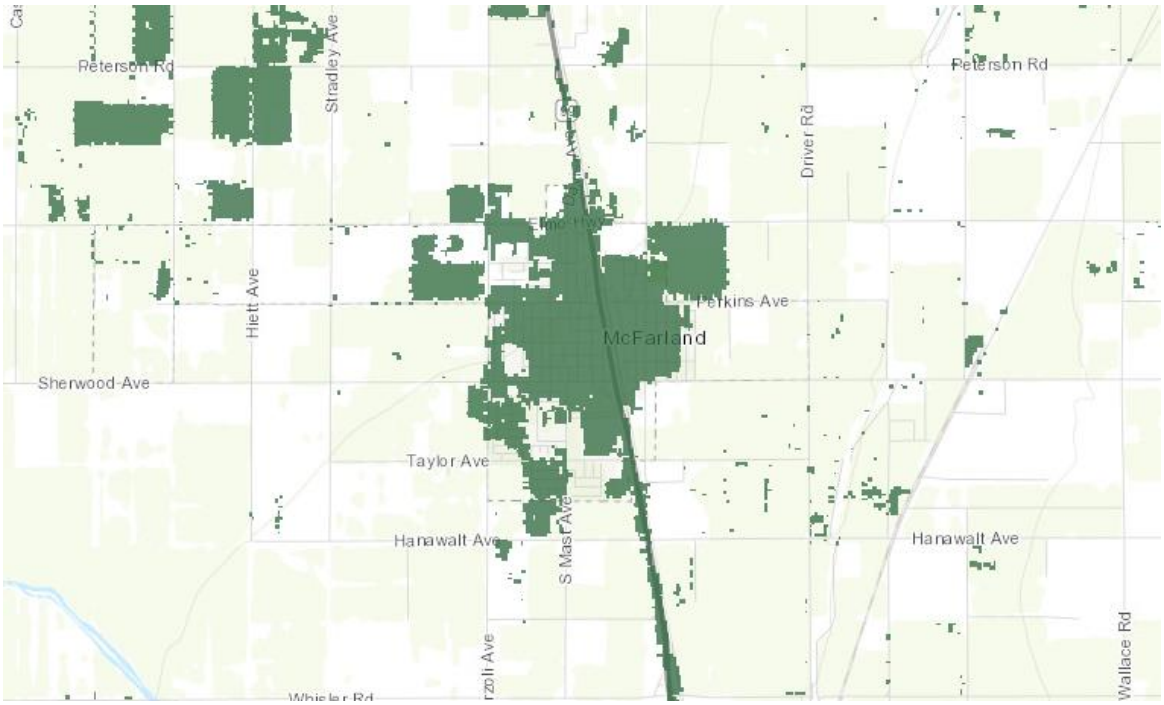
In addition, according to the 2016 5-year status review, the Swainson's Hawk is designated as threatened and its populations are limited in California but are stable in other parts of the country. According to the USFWS, the Burrowing Owl and Tricolored Black Bird are not listed as Threatened or Endangered. However, the Swainson's Hawk is a California Threatened species. This makes it a priority species to conserve habitat for in the State of California unlike the Burrowing Owl and Tricolored Black bird.

There is high habitat suitability for the Swainson's Hawk and the Burrowing Owl, as indicated in green in Map 4.4-3 and 4.4-4. The Tricolored Blackbird has low habitat suitability in McFarland as indicated in Map 4.4-5. If landscape development were to occur within these locations, consideration for vegetation that expands the foraging, breeding, and nesting capabilities of these species should be encouraged.

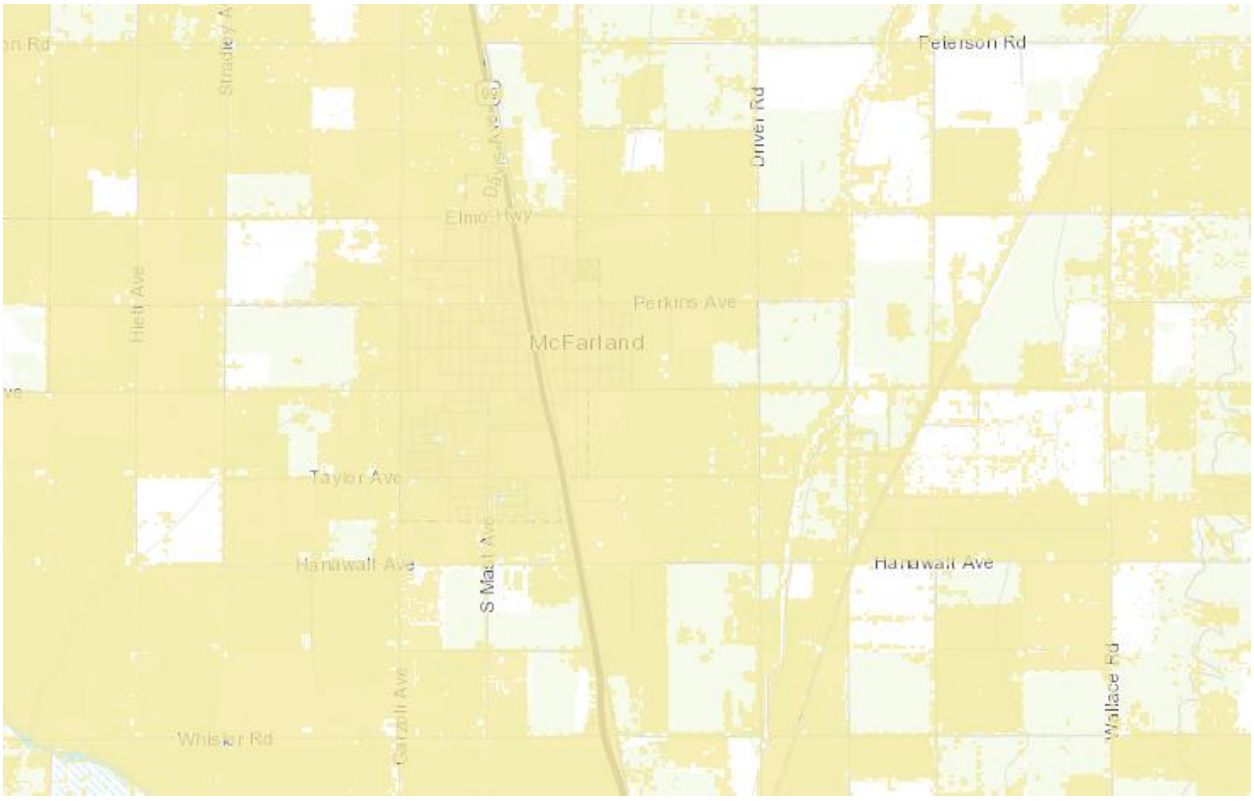
MAP 4.4-2: SWAINSON'S HAWK HABITAT SUITABILITY IN MCFARLAND



MAP 4.4-3: BURROWING OWL HABITAT SUITABILITY IN MCFARLAND



MAP 4.4-4: TRICOLORED BLACKBIRD HABITAT SUITABILITY IN MCFARLAND



4.4.2 STANDARDS OF SIGNIFICANCE

4.4.2.1 CEQA THRESHOLDS

According to Appendix G of the CEQA Guidelines, the proposed Plan could have a significant effect on the environment with respect to Biological Resources if it would:

1. 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;
2. 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;
3. 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;
4. 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;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

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

4.4.2.2 METHODOLOGY

This review of potential cumulative impacts on biological resources that could result from adoption of the proposed Plan was based on review of:

- The proposed Plan; General Plan Background Report;
- FWS resources
- FWS's Environmental Conservation Online System (ECOS)
- CDFW resources
- CDFW's Areas of Conservation Emphasis (ACE-II) Viewer;
- California Native Plan Society's resources and;
- The Center for Biological Diversity resources

The baseline existing conditions were then compared to the proposed Plan to determine the potential impacts on biological resources. The McFarland 2040 General Plan does not contain a biological resources management plan, but existing state and local regulations and policies related to biological resources were accounted for during the analysis.

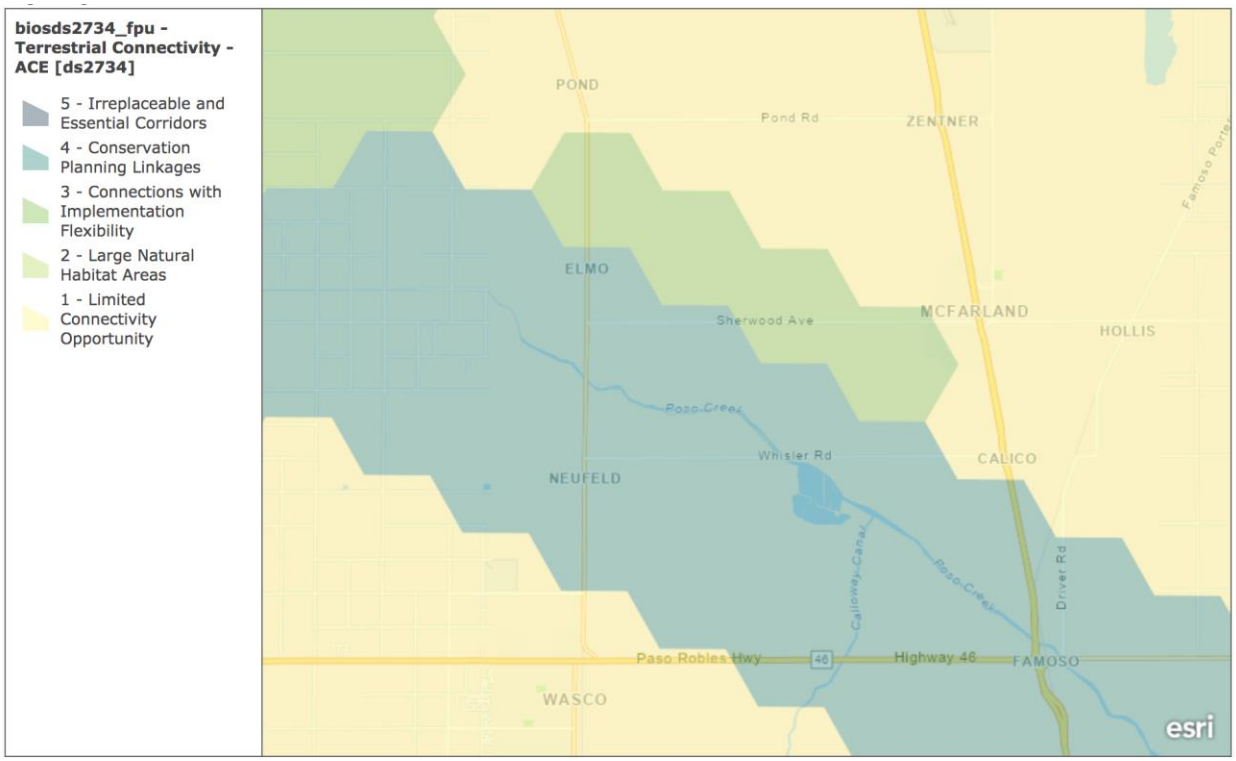
Each of the six CEQA standards of significance for biological resource from the CEQA Guidelines was found to be applicable to the City of McFarland.

4.4.3IMPACT DISCUSSION

BIO – 1 FOLLOWING MITIGATION, THE PROPOSED PLAN WILL HAVE A LESS-THAN-SIGNIFICANT 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.

McFarland is home to a few species that have been historically protected under the federal and state regulation. These four species have been on and off the endangered and threatened species lists over the past years: the Swainson's hawk (*Buteo swainsoni),* Burrowing owl (*Athene cunicularia),* Tricolored Blackbird (*Agelaius tricolor)* and the San Joaquin Kit Fox (*Vulpes macrotis mutica*). Impacts to special status species from the Plan would occur from loss of important habitat areas, population isolation due to habitat fragmentation from development, direct loss of individual species, decreased reproductive success, impeded migration routes, increased noise pollution, and a variety of other indirect impacts. Map 4.4-6 shows areas with essential corridors for connectivity and important habitats for wildlife.

MAP 4.4-6: CALIFORNIA TERRESTRIAL HABITAT CONNECTIVITY



Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

Many of these impacts will be mitigated from the federal and state regulations listed in Section 4.4.1.1. Furthermore, the proposed Plan does not propose development in existing wildlife or natural habitat areas. While, infill development is prioritized in the preferred growth scenario, new development will avoid sensitive areas, and areas of the City that are environmentally sensitive are intended to be preserved. The Plan also includes a policies and programs to support state and federal regulations in the process of species preservation and minimize the impact of development.

Policy CON 3.2.3: Update current public maintenance plans to pesticide free maintenance strategies where feasible.

Program CON 3.2.3.1: Eliminate the use of neonicotinoid insecticides and other highly toxic systemic insecticides.

Program CON 3.2.3.2: Restrict the purchase and use of products that contain neonicotinoids and seeds or plants that have been treated with neonicotinoids.

Program CON 3.2.3.3: Eliminate cosmetic pesticide applications.

Policy CON 3.3.1: Coordinate with the US Fish and Wildlife services.

Program CON 3.3.1.1: Utilize a trained expert before and during construction projects to evaluate the site-specific presence of endangered or threatened species.

Program CON 3.3.1.2: Contact US Fish and Wildlife Services to find financial incentives and opportunities for providing endangered species habitat.

Policy CON 3.3.2: Increase suitability for wildlife in McFarland.

Program CON 3.3.2.1: Adapt existing green spaces in public areas to become attractive to threatened and endangered species in the region. Provide plant material that is attractive to the Tricolored Blackbird, Burrowing Owls, and Swainson's Hawk for nesting and foraging.

Policy LU 1.4.1: Preserve open space in new residential developments.

Program LU 1.4.1.1: Use Transfer of Development Rights (TDR) to promote the protection of open space and sensitive natural areas.

Program LU 1.4.1.2: Prioritize development in areas that can accommodate infill development.

These policies and programs of the proposed 2040 General Plan along with the applicable federal, state, and local regulations would reduce the potential impacts of the plan to special status species. Projects that would potentially occur in areas with special-status species will be subject to project-level environmental review in order to mitigate the impacts to the special-status species. Therefore, impacts from the proposed plan would be less-than significant.

Applicable Regulations:

Federal Endangered Species Act

Migratory Bird Treaty Act

California Endangered Species Act

California Fish and Game Code

California Native Plant Protection Act

The Porter-Cologne Water Quality Control Act of 1960

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

BIO – 2 THE PROPOSED PLAN WILL HAVE A NO IMPACT 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.

There are no wetlands or riparian habitats or other sensitive natural communities in McFarland.

Applicable Regulations:

Federal Endangered Species Act

Migratory Bird Treaty Act

California Endangered Species Act

California Fish and Game Code

California Native Plant Protection Act

The Porter-Cologne Water Quality Control Act of 1960

Significance Before Mitigation: No impact

BIO – 3 THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT 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.

The City is nearly surrounded by croplands and Williamson Act lands with the intention of preserving prime farmland, which controls the development envelope. Otherwise, the regional geography poses low fire risk to McFarland, and lacks wetlands, forested areas, or other sensitive habitat that might hinder development. Yet there is a slight potential for interruption of the hydrological cycle with impervious surfaces that come with urban development. Policies and programs in the Plan address this potential.

> **Program CD 1.1.1.4:** Identify materials to use in defining McFarland including recommendations for roof tiling, building exteriors, building colors, hardscape materials and planting.

Policy PF 1.2.3: Accommodate future need for stormwater infrastructure.

> **Program PF 1.2.3.1:** Examine existing stormwater capacity and project increases in runoff.
>
> **Program PF 1.2.3.2:** Pursue the creation of new stormwater basins and facilities to match increases in population and area.

Applicable Regulations:

Federal Endangered Species Act

Migratory Bird Treaty Act

California Endangered Species Act

California Fish and Game Code

California Native Plant Protection Act

The Porter-Cologne Water Quality Control Act of 1960

Significance Before Mitigation: Potentially significant

Significance Before Mitigation: Less than significant

BIO – 4 THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT INTERFERENCE WITH THE MOVEMENT OF ANY NATIVE RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES OR WITH STABLISHED NATIVE RESIDENT OR MIGRATORY WILDLIFE CORRIDORS OR IMPEDE THE USE OF NATIVE WILDLIFE NURSERY SITES.

The proposed Plan could result in some impact if new development would interfere with movement of species through corridors, migration patterns, or affect their ability to reach breeding locations. Certain policies in the Plan address the situation.

Policy CON 3.3.1: Coordinate with the US Fish and Wildlife services.

Program CON 3.3.1.1: Utilize a trained expert before and during construction projects to evaluate the site-specific presence of endangered or threatened species.

Program CON 3.3.1.2: Contact US Fish and Wildlife Services to find financial incentives and opportunities for providing endangered species habitat.

Policy CON 3.3.2: Increase suitability for wildlife in McFarland.

Program CON 3.3.2.1: Adapt existing green spaces in public areas to become attractive to threatened and endangered species in the region. Provide plant material that is attractive to the Tricolored Blackbird, Burrowing Owls, and Swainson's Hawk for nesting and foraging.

With these policies and programs of the proposed General Plan as well as with applicable federal and state regulations, the potential impacts to wildlife movement will be greatly reduced.

Applicable Regulations:

Federal Endangered Species Act

Migratory Bird Treaty Act

California Endangered Species Act

California Fish and Game Code

California Native Plant Protection Act

The Porter-Cologne Water Quality Control Act of 1960

Significance Before Mitigation: Less than significant

BIO – 5 THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT CONFLICT WITH ANY LOCAL POLICIES OR ORDINANCE PROTECTING BIOLOGICAL RESOURCES, SUCH AS A TREE PRESERVATION POLICY OR ORDINANCE.

The proposed Plan will not conflict with any local policies or ordinances protecting biological resources. Rather, the proposed General Plan update is to support the adoption of policies and ordinances that can protect biological resources in the City. The policies and programs within the Plan further reduce any potential and unforeseen impacts to a less than significant level.

Policy CON 3.3.1: Coordinate with the US Fish and Wildlife services.

Program CON 3.3.1.1: Utilize a trained expert before and during construction projects to evaluate the site-specific presence of endangered or threatened species.

Program CON 3.3.1.2: Contact US Fish and Wildlife Services to find financial incentives and opportunities for providing endangered species habitat.

Policy CON 3.3.2: Increase suitability for wildlife in McFarland.

Program CON 3.3.2.1: Adapt existing green spaces in public areas to become attractive to threatened and endangered species in the region. Provide plant material that is attractive to the Tricolored Blackbird, Burrowing Owls, and Swainson's Hawk for nesting and foraging.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

BIO – 6 THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT CONFLICT WITH THE PROVISIONS OF AN ADOPTED HABITAT CONVERSATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN.

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that are relevant in this context. Even unforeseen possibilities are adjudged less than significant.

Applicable Regulations:

Federal Endangered Species Act

California Endangered Species Act

California Department of Fish and Game Code

California Native Plant Society

Significance Before Mitigation: Less than significant.

4.4.4 SUMMARY OF POTENTIAL IMPACTS AND MITIGATION MEASURES

McFarland is home to Swainson's hawk, Burrowing owl, Tricolored Blackbird, and the San Joaquin Kit Fox which have been historically protected under federal and state regulations. These four species have been on and off the endangered and threatened species lists over the years. Impacts to special status species from the Plan could occur from loss of important habitat areas, population isolation due to habitat fragmentation from development, direct loss of individual species, decreased reproductive success, impeded migration routes, increased noise pollution, and a variety of other indirect impacts.

BIO – 1 THE PROPOSED PLAN COULD HAVE A POTENTIALLY SIGNIFICANT 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.

MITIGATION MEASURE BIO-1A:

Comply with all State and Federal requirements for the protection of endangered and special status species.

Significance After Mitigation: Less than significant

MITIGATION MEASURE BIO-1B:

Protect and mitigate impacts on listed and special status species in accordance with CEQA and/or NEPA regulations.

Significance After Mitigation: Less than significant

4.4.5 REFERENCES

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4.5 Cultural: Archeological and Historical Resources

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				x
2. Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5?		x		
3. Disturb any human remains, including those interred outside of formal cemeteries?		x		

4.5.1 Environmental Setting

This section discusses the environmental setting regarding archaeological and historical resources in the City of McFarland.

4.5.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the archeological and cultural potential impacts of the proposed Plan.

Federal Regulations

Archaeological Resources Protection Act of 1979

This act preserves and protects archaeological, historic, and paleontological resources and requires the issuance of permits in order to excavate or remove any archaeological or paleontological resources from federal lands and tribal lands. Unauthorized activities are punishable by fine, imprisonment, or both.

Historic Sites Act of 1935

This act authorized the Historic American Buildings Survey and the Historic American

Engineering Record and the National Survey of Historic Sites; authorized the establishment of national historic sites and designation of national historic landmarks; and authorized interagency, intergovernmental, and interdisciplinary efforts for the preservation of cultural resources.

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 created a National Register of Historic Places (National Register) for the official designation of historic resources including districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. To qualify for significance in the National Register, resources must possess integrity of location, design, setting, materials, workmanship, feeling and association, in addition to any of the following:

1. Be associated with events that made a significant contribution to the broad patterns of American history; or
2. Be associated with lives of significant persons in or past; or
3. Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity; or
4. Have yielded or may yield, information important in history and prehistory.

Resources less than 50 years old are not considered eligible except for those resources that have achieved significance of exceptional importance. The California Environmental Quality Act (CEQA) requires the evaluation of projects that affect properties that are listed in the National Register.

Native American Graves Protection And Repatriation Act of 1990

Provides a process for museums and Federal agencies to return certain Native American, cultural items, human remains, funerary objects, sacred objects, or objects of cultural patrimony to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and tribal lands, and penalties for noncompliance and illegal trafficking. In addition, NAGPRA authorizes Federal grants to Indian tribes, Native Hawaiian organizations, and museums to assist with the documentation and repatriation of Native American cultural items and establishes the Native American Graves Protection and Repatriation Review Committee to monitor the NAGPRA process and facilitate the resolution of disputes that may arise concerning repatriation under NAGPRA.

The principal steps of the NAGPRA repatriation process include:

1. Federal agencies and museums must identify cultural items in their collections that are subject to NAGPRA and prepare inventories and summaries of the items.

2. Federal agencies and museums must consult with lineal descendants, Indian tribes, and Native Hawaiian organizations regarding the identification and cultural affiliation of the cultural items listed in their NAGPRA inventories and summaries.
3. Federal agencies and museums must send notices to lineal descendants, Indian tribes, and Native Hawaiian organizations describing cultural items and lineal descendancy or cultural affiliation and stating that the cultural items may be repatriated. The law requires the Secretary of the Interior to publish these notices in the Federal Register.

State Regulations

The California Environmental Quality Act (CEQA)

CEQA Guidelines (2014) section 15064.5 requires local agencies to determine if a project may cause substantial adverse change in the significance of a historical resource. CEQA considers impacts to historical resources as impacts to the environment. This is to protect historical resources from substantial adverse change though physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Adverse change to these resources could potentially impair the material significance. CEQA defines historical resources as meeting one of four requirements:

- If a resource is listed, or determined eligible for listing, in the California Register of Historical Resources.
- The resource is included in a local register of historical resources, as defined in section 5020.1 (k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, unless a preponderance of evidence demonstrates it is not historically or culturally significant.
- The lead agency has determined that the resource is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, and may be considered a historical resource so long as the lead agency's determination is supported by substantial evidence in light of the whole record.
- If the lead agency determines the resource may be a historical resource as defined in Public Resources Code Sections 5020.1 (j) or 5024.1 and the resource is not listed or eligible for listing in the California Register of Historical Resources, not included in a local register (pursuant to section 5020.1 (k) of the Public Resources Code) or identified in a historical resources survey (meeting the criteria of section 5024.1 (g) of the Public Resources Code).

In addition, Public Resources Code Section 21083.2; and Section 15126.4 of the CEQA Guidelines (2014), state that the lead agency shall determine whether a project may have a significant impact on archaeological resources. If a project is determined to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all resources to be preserved in place or left in an undisturbed state. Preservation in place is preferred to mitigation measures. Preservation in place maintains the relationship between artifacts and the archaeological context. The Public Resources Code provides required mitigation if unique archaeological resources are not preserved in place or not left in an undisturbed state.

Section 15064.5 of the CEQA Guidelines (2014) specifies procedures in the event of an accidental discovery of Native American human remains on non-federal land. These provisions protect such remains from disturbance, disinterment, and inadvertent destruction, outline procedures to be implemented if Native American remains are discovered and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

2013 California Historical Building Code, California Code Of Regulations, Title 24, Part 8

The California Historical Building Code (CHBC), as stated in Sections 18950 to 18961 of Division 13, Part 2.7 of Health and Safety Code, and subject to the rules and regulations in 24 CCR Part 8, supplies regulations and standards for the rehabilitation, preservation, restoration, qualified historical building or structure is any structure or collection of structures, and their associated sites deemed of importance to the history, architecture or culture of an area by an appropriate local or State governmental jurisdiction. This includes any structures in existing or future national, state, or local historical registers or official inventories, such as the National Register of Historic Places (NRHP), State Historical Landmarks, State Points of Historical Interest, and city or county registers or inventories of historic or architecturally significant sites, places, historic districts, or landmarks.

Health And Safety Code, Section 7052, Section 7050.5

Sections 7052 and 7050.5 of the Health and Safety Code outlines penalties associated with the intentional disturbance, mutilation, or removal of interred human remains. Health and Safety Code 7050.5 provides procedural guidelines for the discovery of human remains outside of a dedicated cemetery. The disinterment of remains known to be human and without the authority of law is a felony and intentional disturbance of remains is a misdemeanor.

California State Senate Bill 18

Senate Bill (SB) 18 requires local governments (cities and counties) to consult with Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. SB 18 provides California Native American tribes an opportunity to participate in local land use decisions of planning. The purpose of the bill is to protect or mitigate impacts to cultural places with the intent of involving the tribes at early planning stages. This allows for consideration of cultural places in the context of broad local land use policy prior to an individual site-specific project where land use designations are made by the local government. This bill is meant to protect land with special religious or social significance to California Native American tribes.

Public Resources Code Section 5097

Public Resources Code Section 5097 identifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. The character of Native American burials falls within the jurisdiction of the Native American Heritage Commission (NAHC). The NAHC prohibits willfully damaging any historical, archaeological, or vertebrate paleontological site or feature on public lands.

Local Regulations

The City of McFarland does not have any local regulations specifically regarding cultural resources.

4.5.1.2 Existing and baseline Conditions

According to the existing General Plan, there are no National Historical Landmarks (NLM) or no California Historical Landmarks (CHL) in McFarland. The closest eligible place is the Friant-Kern Canal, which is eligible for National Register of Historic Places (NRPH). Aside from this singular off-site example, no historic sites or buildings in the City are listed on the National Register of Historic Places, the California Landmark Series, or List of State Points of Historical Interest. As the threshold for historical significance is fifty years old, certain buildings may be historically significant in the future, though no historic places were identified as significant upon site analysis and inventory, nor through community outreach. There are a few historic resources in other locations within Kern County.

There are a total of 19 identified tribes with traditional lands or cultural places located within the SOI as identified by the Native American Heritage Commission (NAHC, 2020). The NAHC conducted a Sacred Land's File check which was found to be negative. Appendix 9.1.5 has details.

In 2015, the City of McFarland initiated a records search of California Historical Resource Information System (CHRIS). The CHRIS search included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the California State Historic Resources Inventory list, and the Office of Historic Preservation (OHP) Historic Property Directory. The records search identified 14 previously conducted studies and 14 cultural resources within the project site and 200-foot buffer. All of the cultural resources are built environment and were constructed during the 20th century. One resource, the Friant-Kern Canal has been previously determined eligible for the CRHR and NRHP (City of McFarland, 2016).

History

The City of McFarland was founded in 1909 by an educator named James Boyd McFarland, who moved to California from Ohio and purchased 50 acres of land in what is now McFarland. His purchase was based on his observations that the land had the potential to become prime agricultural land in the pristine San Joaquin Valley. As the burgeoning agricultural industry expanded in the valley, the City of McFarland grew as the region matured.

The addition of Highway 99 in 1950 helped McFarland grow by connecting the City to wider region. For the remainder of the 20th century, McFarland continued to experience various periods of growth as the farming community became a full-service city within Kern County. In the 1980s, McFarland High School's cross-country team, with guidance from their coach Jim White, won 9 state titles. The events that brought McFarland great amounts of positive press was dramatized in the 2015 Disney-

produced film “McFarland, USA” which centers on the award-winning cross-country team and their impact on the City of McFarland.

4.5.2 Standards of Significance

4.5.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to aesthetics if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
2. Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5;
3. Disturb any human remains, including those interred outside of formal cemeteries.

4.5.2.2 Methodology

The cultural resources impact assessment was based on a review of the National, State, and Local Register of Historic Buildings, and other relevant documentation. The discussion follows; and it is organized by the impact criteria laid out in the CEQA Appendix G Guidelines.

4.5.3Impact Discussion

This section discusses Plan-specific impacts related to cultural resources.

CULT – 1 The proposed Plan would **NOT** cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5

Implementation of the proposed Plan could have a significant environmental impact if it would cause substantial adverse change in the significance of a historical resource, which is any building, structure, feature object, or site of historic or cultural importance, as listed on National Register, California Register, or designated a historic resource by the City of McFarland. While the act of adopting the Plan would not directly result in impacts, implementation of the Plan could allow development and redevelopment that could potentially impact historic resources through direct alteration, damage, or demolition of listed or registered historic structures or historic sites.

McFarland does not have any officially designated historic resources leading to a conclusion of no impact. However, the proposed Plan still seeks to preserve non-designated historic resources by confining growth to key growth areas. In addition, the Plan proposes the following policies to reduce any potential impacts to hitherto unknown historic resources:

Policy OS 2.1.1: Protect and maintain the City's historic cultural resources.

Program OS 2.1.1.1: Include Native American Tribal Authorities in environmental review processes.

Program OS 2.1.1.2: Provide confidential review and protection for cultural heritage resources if present or found during development.

Policy OS 2.1.2: Promote the use of open space for cultural and community enrichment.

Program OS 2.1.2.1: Use public open spaces for events such as celebrations, festivals, farmers' markets, and concerts.

Policy OS 2.1.3: Foster an appreciation of diverse cultural identities through geographic and historical context.

Program OS 2.1.3.1: Establish a system of signage that promotes and provides historical context for open space resources.

Program OS 2.1.3.2: Promote the McFarland historical society.

Applicable Regulations: None

Significance Before Mitigation: No impact

CULT – 2 FOLLOWING MITIGATION, THE PROPOSED PLAN WOULD CAUSE A LESS-THAN-SIGNIFICANT SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHEOLOGICAL RESOURCE PURSUANT TO 15064.5.

Construction activities associated with buildout of the proposed Plan could cause a significant impact to archaeological resources in the plan area by potentially damaging or disturbing as yet undiscovered archaeological deposits through the placement of fill and soil compression. As such, the potential for encountering archeological resources could exist in some sections of the plan area. The Conservation and

Open Space Elements of the proposed Plan provide many policies and actions to reduce the damage to archaeological resources:

Policy OS 1.1.1: Provide park spaces within a quarter mile of residential neighborhoods.

Program OS 1.1.1.1: Condition new residential development on the creation of park space through in lieu fees, direct dedication, or similar measures.

Policy OS 2.1.1: Protect and maintain the City's historic cultural resources.

Program OS 2.1.1.1: Include Native American Tribal Authorities in environmental review processes.

Program OS 2.1.1.2: Provide confidential review and protection for cultural heritage resources if present or found during development.

Policy OS 2.1.2: Promote the use of open space for cultural and community enrichment.

Program OS 2.1.2.1: Use public open spaces for events such as celebrations, festivals, farmers' markets, and concerts.

Policy OS 2.1.3: Foster an appreciation of diverse cultural identities through geographic and historical context.

Program OS 2.1.3.1: Establish a system of signage that promotes and provides historical context for open space resources.

Program OS 2.1.3.2: Promote the McFarland historical society.

Applicable Regulations: Government Code section 15064.5

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

CULT – 3 FOLLOWING MITIGATION, THE PROPOSED PLAN WOULD RESULT IN A LESS-THAN-SIGNIFICANT AND UNAVOIDABLE IMPACTS BY DISTURBING ANY HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES.

Historically, Native Americans inhabited the region, and historically significant sites within the region have been discovered. There exists the potential of significant impacts if there were unknown sites of human remains discovered during the build-out of the Plan's development areas. There are no known such sites in the Plan's key growth areas. If any were to be discovered, impacts would both be significant and unavoidable. In the event human remains are discovered during the build-out of the Plan's proposed developments, construction must be stopped, and a qualified coroner must be contacted to determine if the remains are of Native American origin. If the coroner makes this determination, the coroner should contact the Native American Heritage Commission within 24 hours. Additionally, the plan proposes the following policies to reduce the likelihood of impacts:

Policy OS 1.1.1: Provide park spaces within a quarter mile of residential neighborhoods.

Program OS 1.1.1.1: Condition new residential development on the creation of park space through in lieu fees, direct dedication, or similar measures.

Policy LU 1.4.1: Preserve open space in new residential developments.

Program LU 1.4.1.1: Use Transfer of Development Rights (TDR) to promote the protection of open space and sensitive natural areas.

Program LU 1.4.1.2: Prioritize development in areas that can accommodate infill development.

Applicable Regulations:

AB 52

SB 18

California Health and Safety Code Section 7052 and 7050.5

California Public Resources Code Section 5097 and 15064.

California Public Resources Code §21080.3.2

Significance Before Mitigation: Potentially significant and unavoidable

Significance After Mitigation: Less than significant

4.5.4 Summary of Potential Impacts and Mitigation Measures

The following mitigation measures are intended to mitigate potentially significant impacts regarding cultural resources. Impacts may be both significant and unavoidable.

CULT – 2 The proposed Plan would cause potentially significant substantial adverse change in the significance of an archeological resource pursuant to 15064.5.

Construction activities associated with buildout of the proposed Plan could cause a significant impact to archaeological resources in the plan area by potentially damaging or disturbing as yet undiscovered archaeological deposits through the placement of fill and soil compression. Therefore, the potential for encountering archeological resources could exist in some sections of the plan area.

MITIGATION CULT - 2A

In anticipation of this eventuality, the City of McFarland shall implement the policy:

In the event that archeological or paleontological resource is unearthed or otherwise discovered during construction related activities associated with the proposed Plan, all work must be suspended until a qualified archeologist is consulted.

Significance After Mitigation: Less than significant

CULT – 3 The proposed Plan would result in a potentially significant and unavoidable impacts by disturbing any human remains, including those interred outside of formal cemeteries.

Historically, Native Americans inhabited the region, and historically significant sites within the region have been discovered. There exists the potential of significant impacts if there were unknown sites of human remains discovered during the build-out of the Plan's development areas. There are no known such sites in the Plan's key growth areas. If any were to be discovered, impacts would both be significant and unavoidable.

MITIGATION CULT - 3A

In the event human remains are discovered during the build-out of the Plan's proposed developments, construction must be stopped, and a qualified coroner must be contacted to determine if the remains are

of Native American origin. If the coroner makes this determination, the coroner should contact the Native American Heritage Commission within 24 hours.

Significance After Mitigation: Less than significant

4.5.5 References

City of McFarland, CA. (2021). City of McFarland General Plan Update Background Report. McFarland, CA.

City of McFarland, CA. (2021). City of McFarland 2040 General Plan. McFarland, CA.

California Historical Resources. (2013). Retrieved October 27, 2016, from http://ohp.parks.ca.gov/listedresources/

United States. National Park Service. (2013). National Register of Historic Places, U.S. Department of the Interior. Retrieved October 27, 2016, from https://www.nps.gov/nr/

4.6 Geology and Soils

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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?			X	
2. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?			X	
3. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic related ground failure, including liquefaction?			X	
4. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?			X	
5. Result in substantial soil erosion or the loss of topsoil?			X	

6.	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?	X
7.	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?	X
8.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	X
9.	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	X

4.6.1 Environmental Setting

This section discusses the environmental setting regarding geology and soils in the City of McFarland.

4.6.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the potential impacts related to geology and soils of the proposed Plan.

Federal Regulations

Soil and Water Resources Conservation Act

The purpose of the Soil and Water Resources Conservation Act (RCA) of 1977 is to protect or restore the functions of the soil on a permanent sustainable basis. The RCA gives the Department of Agriculture the

strategic assessment and planning authority to ensure that soil and water resource conservation programs are adequately managing current and future demands. The RCA also calls for a National Conservation Program to guide landowners and evaluate problems with current handling of national resources, examine alternatives, and cost benefit analysis of conservation practices.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code §2621 et seq.) passed into law in 1972 as the result of the devastation from the 1971 San Fernando earthquake. The law is designed to prevent construction of buildings for human occupancy on the surface of active faults. The law requires state geologists to establish regulatory zones (Earthquake Fault Zones) around the surface trace of active faults, with maps distributed to all affected cities, counties, and state agencies for the use of planning new and renewed construction. Before a project can be permitted, cities must require a geologic investigation to demonstrate the proposed construction is not built across an active fault. If active faults are found, a structure cannot be built over the trace of the fault and must be set back from the fault between 50 feet and . mile in most cases.

California Building Standards Code

The California Building Standards Code serves as the basis for design and construction of all new buildings in California. It requires that all new buildings be constructed in accordance with minimum standards. The Code includes measures of seismic survivability and safety requirements.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) directs the Department of Conservation and

Geological Survey to identify areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. Data collected from these agencies are analyzed and integrated to produce Zones of Required Investigation (ZORI). SHMA requires cities to use the Seismic Zone Maps in their land use planning and building process.

Local Regulation

The Kern County Multi-Hazard Mitigation Plan

The Kern County Multi-Hazard Mitigation Plan (MHMP) provides a risk assessment profile for seismic hazards in Section 4.2. The profile includes specific locations of risk, history of events, vulnerability assessments, and the mitigation capabilities of the County. The MHMP includes a Mitigation Action Plan, which identifies actions, and assigns responsibilities to agencies to reduce damage and loss to existing and future development in the event of a flooding event. All incorporated cities and incorporated lands in Kern County are party to the MHMP.

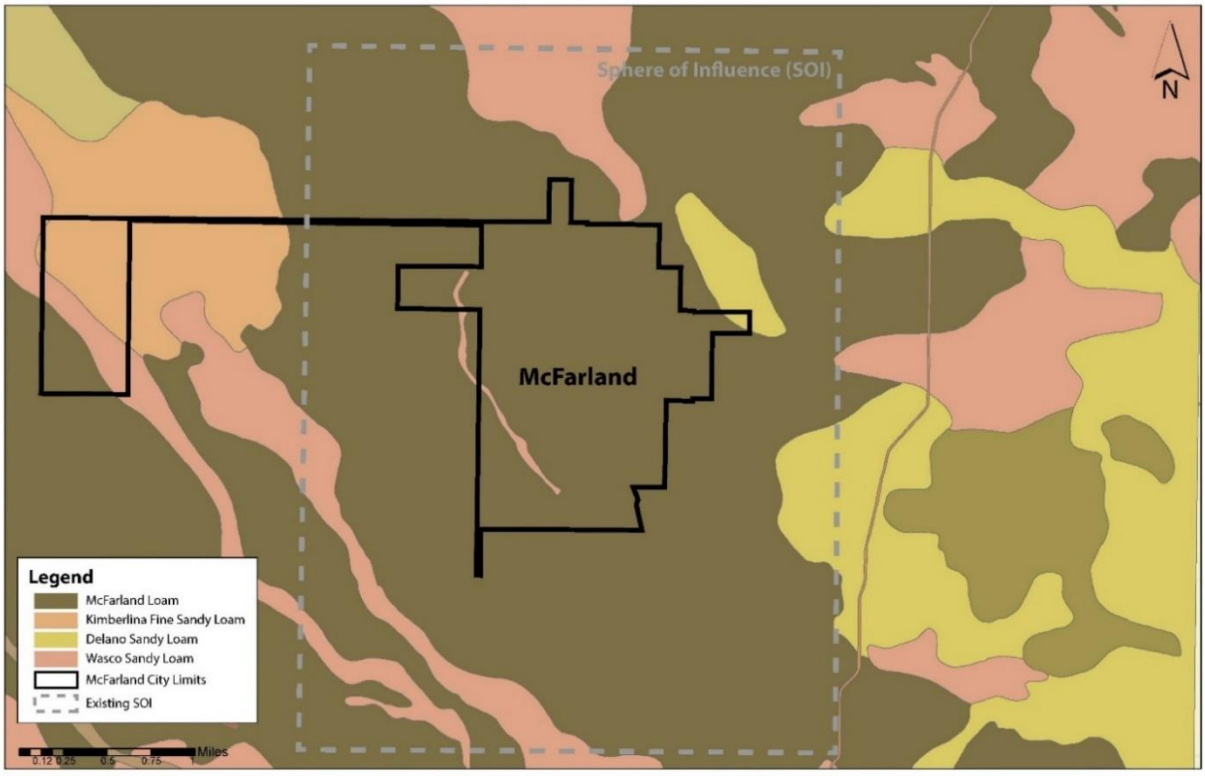
4.6.1.2 Existing and baseline Conditions

Soils and Minerals

According to the California Department of Conservation, there are six farmland designations regarding soil health: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, and Urban and Built-up land. The "Prime Farmland" designation is used for the highest quality soil, and this designation applies to most soils in McFarland.

Mineral extraction operations do not exist in the City of McFarland, but there are operations within Kern County. The City has restrictions in its municipal code that do not allow mining operations within McFarland.

Map 4.6-1: USGS Soils



The City of McFarland has four dominant soil types within its City boundaries and Sphere of Influence (SOI). The four soil types include:

- Wasco Sandy Loam
- McFarland Loam
- Delano Sandy Loam

- Kimberlina Fine Sandy Loam

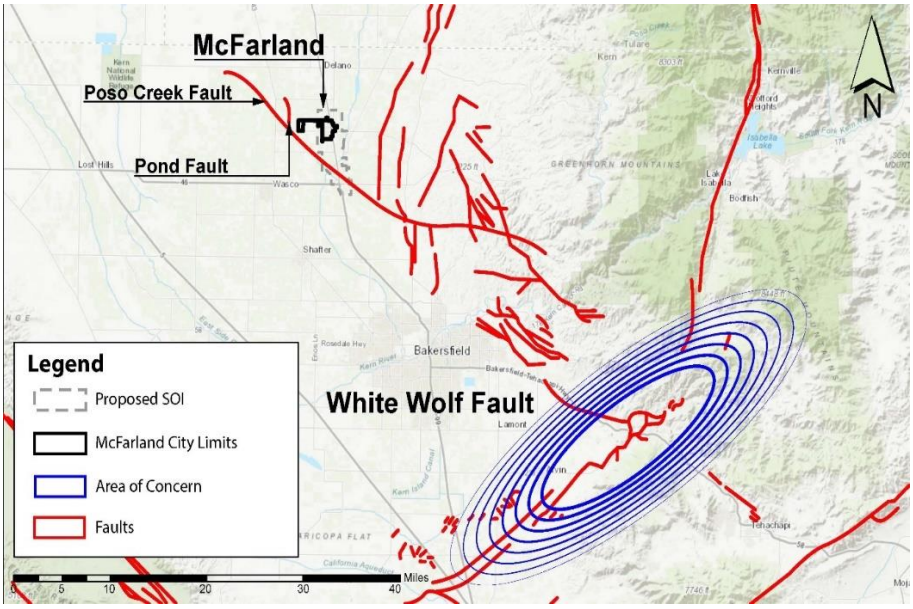
Additionally, there are numerous parcels of farmland surrounding McFarland that are covered by the Williamson Act, preserving the land from being developed into other uses. McFarland Loam is the most prominent soil within and adjacent to McFarland's City limits.

Earthquakes, Faults, and Ground shaking

A fault is a geologic fracture in which blocks of the Earth's crust on either side have moved relative to one another, parallel to the fracture. An earthquake is the vibration of the Earth's surface caused by movement along a fault. Ground shaking is the random motion in an up-and-down and back-and-forth direction due to an earthquake and the effects are determined by the distance to its epicenter and soil conditions.

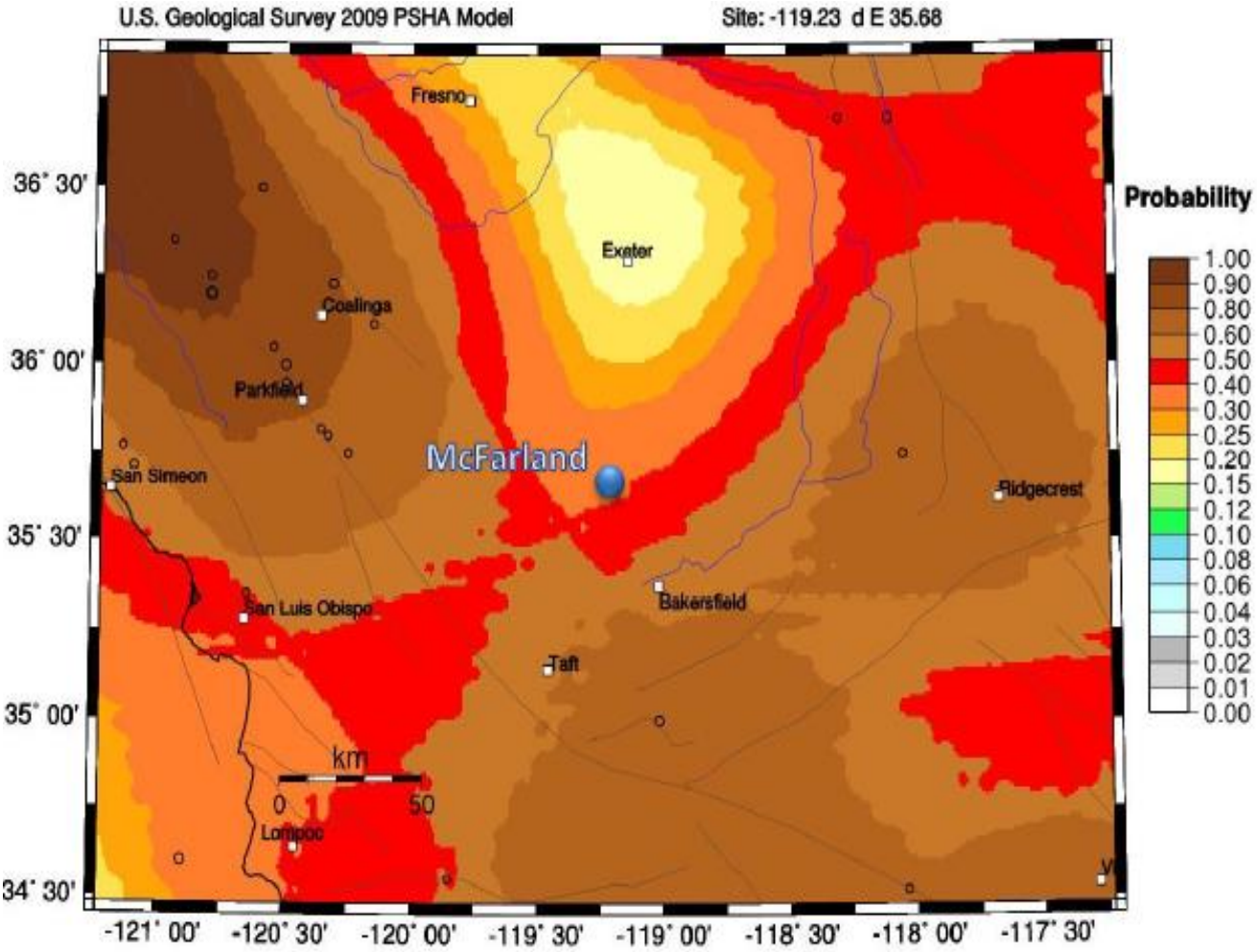
Like much of California, McFarland is located within a seismically active region and will inevitably experience some seismic-related events. No faults run directly through McFarland; the closest fault is the Poso Creek Fault approximately 1.5 miles from the City, although it is considered inactive, as shown in Map 4.6-2.The closest active fault is the Pond Fault Zone located six miles to the west. An active fault is a fault that has ruptured within the last 11,000 years. According to the 2016 Local Hazard Mitigation Plan, the Pond Fault was considered sufficiently active to be classified as an Alquist-Priolo fault zone by the State Geologist in 1983. The closest active and potentially hazardous fault zone is the White Wolf Fault Zone, located 55 miles south of McFarland. On July 21st, 1952, McFarland experienced the Kern County Earthquake on the White Wolf Fault, with a magnitude 7.5 at its epicenter approximately 48 miles away. The White Wolf Fault is traceable for 34 miles, a shorter length than generally thought necessary to produce a major earthquake. For comparison, the San Andreas Fault is approximately 250 miles long.

MAP 4.6-2: FAULTS NEAR MCFARLAND

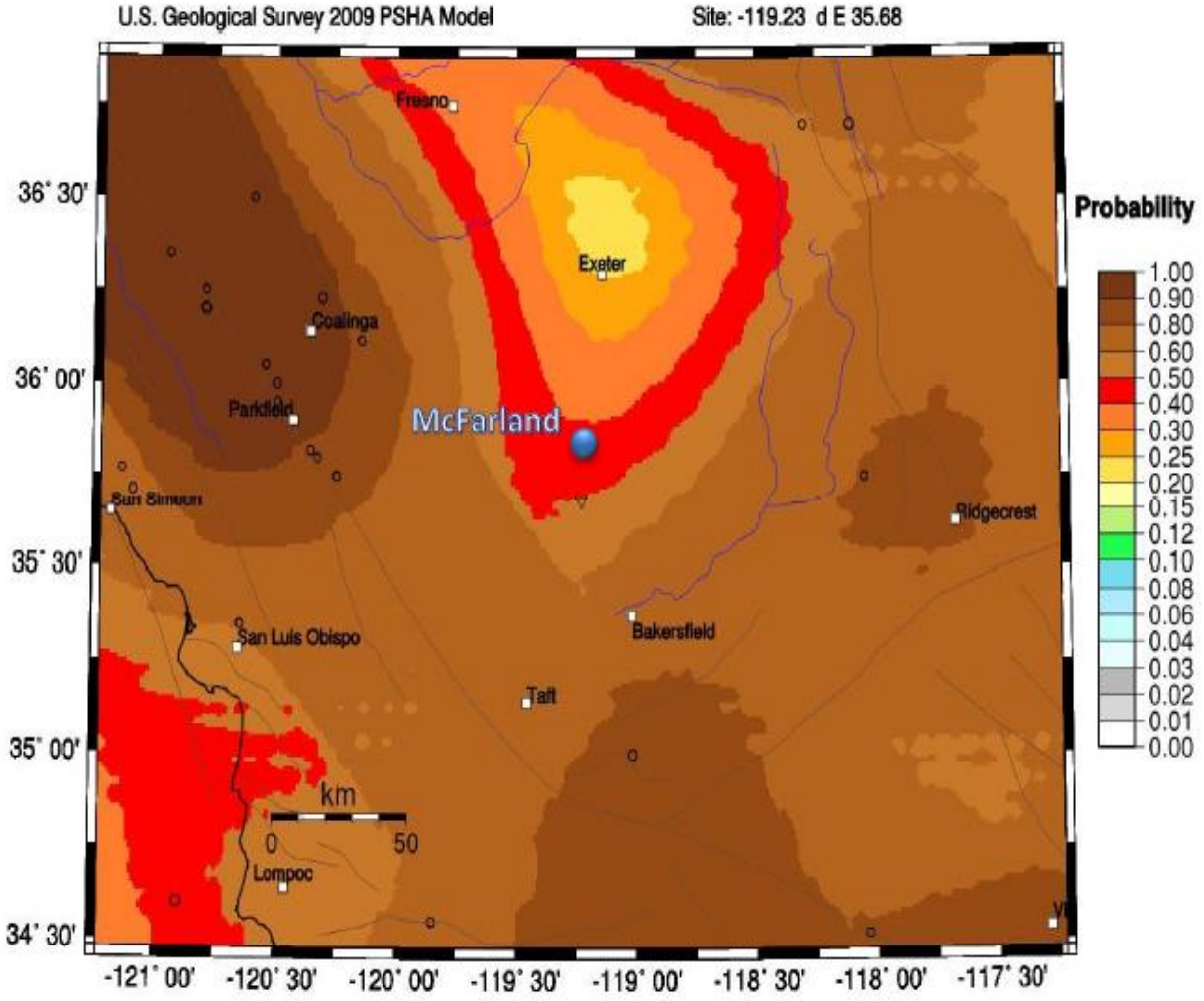


Seismic hazard mapping shows that the City has a low seismic hazard potential yet is at moderate risk for earthquake vulnerability. The Probabilistic Seismic Hazards Maps (PSHM) in Maps 4.6-3 and 4.6-4 show McFarland has a 25 to 30% chance of experiencing an earthquake greater than magnitude 5.0 within the next 20 years and a 50 to 60% chance of experiencing an earthquake greater than magnitude 5.0 within the next 30 years.

MAP 4.6-3: EARTHQUAKE MAGNITUDE PROBABILITY GREATER THAN 5.0 WITHIN 20 YEARS



MAP 4.6-4: EARTHQUAKE MAGNITUDE PROBABILITY GREATER THAN 5.0 WITHIN 30 YEARS



Secondary Seismic Hazards

Earthquakes and ground shaking can cause secondary seismic hazards. These hazards include liquefaction, earthquake-induced landslide and slope failures, and seismic seiches.

Liquefaction is the conversion of soil into a fluid-like state. Liquefaction occurs when loose, poorly graded sand that is saturated with water experiences strong shaking, resulting in ground failure. McFarland is not within an area identified as having the potential for liquefaction.

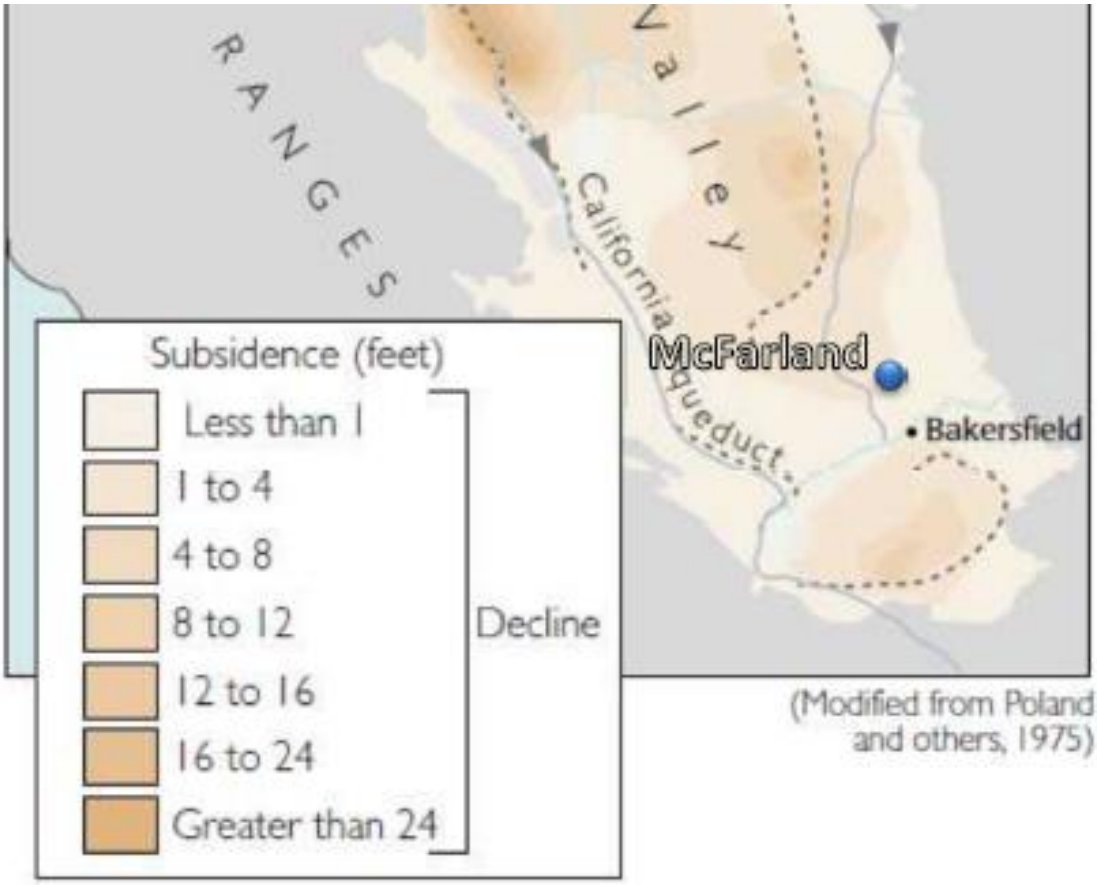
Earthquake-induced landslide and slope failure occurs when steep slopes composed of weak materials fail because of ground shaking caused by an earthquake. McFarland is not in an area identified as having the potential for earthquake-induced landslide or slope failure.

Seismic seiches are standing waves in a body of water, such as rivers, reservoirs, and lakes. There are no large bodies of water within McFarland. Lake Woollomes is 3.5 miles to the northeast, but vacant land and the Friant-Kern Canal would limit the potential for water to reach McFarland.

Subsidence

Subsidence occurs when land is displaced vertically. Ground shaking can accelerate ground failure in areas affected by subsidence. Subsidence typically occurs due to the withdrawal of groundwater, oil, natural gas, or other resource extractive activities. Subsidence has occurred near the City of Delano, located three miles north of McFarland. According to McFarland's 2016 Local Hazard Mitigation Plan, 75% of the total volume of land subsidence occurred due to groundwater pumping of the deep aquifer system during the 1950s and 1960s. Map 4.6-5 shows the amount of subsidence in the southern San Joaquin Valley between 1926 and 1970 near McFarland. Collectively with landslides and slope failure, subsidence is also referred to as ground failure.

MAP 4.6-5: SUBSIDENCE FROM 1926 TO 1970 NEAR MCFARLAND



McFarland is at risk for future ground failure, as it is affected by subsidence with seismic ground shaking due to population growth, historic water withdrawal, and existing subsidence conditions. The map shows the past occurrences of subsidence in the Central Valley near the City of McFarland.

4.6.2 Standards of Significance

Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018) provide standards of significance that relate to geology and soils. Seismic standards of significance seek to limit development in areas that have high threats of damage during seismic events. Soil standards of significance seek to prevent erosion, structural damage from unsuitable soils, and prevent pollution from septic tanks.

4.6.2.1 CEQA Thresholds

The proposed Plan build-out would have significant impacts if it would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

1. 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;
2. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking;
3. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic related ground failure, including liquefaction;
4. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides;
5. Result in substantial soil erosion or the loss of topsoil;
6. 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;
7. 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;
8. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
9. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

4.6.2.2 METHODOLOGY

Determination of potential impacts for the proposed Plan on geologic and soil-based potential risks is based on the review of the Plan as well as pertinent surveys and reports. This includes data from the U.S. Geological Service, the California department of Conservation, and California Geological Survey.

4.6.3IMPACT DISCUSSION

GEO – 1 THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT IN DIRECTLY OR INDIRECTLY CAUSING 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

Seismic hazard mapping shows that the City has a low seismic hazard potential yet is at moderate risk for earthquake vulnerability. The closest active fault is six miles west while the closest active and potentially hazardous fault zone is White Wolf Fault Zone, located 55 miles south of McFarland. The White Wolf Fault Zone last erupted in 1952. The Plan addresses seismic considerations in its goals, policies, and programs in the Safety Element.

Policy SAF 2.1.1: Encourage reduction in the risk of loss of life, personal injury and damage to property resulting from geologic and seismic hazards.

Program SAF 2.1.1.1: Coordinate with McFarland Public Works Department to organize and publicize educational events.

Program SAF 2.1.1.2: Educate residents on ways to mitigate injury and damage associated with earthquakes in their homes.

Program SAF 2.1.1.3: Using the latest building codes adopted by the State of California, incorporate geotechnical hazard data in land use decision making, site design, and construction.

Program SAF 2.1.1.4: Encourage site-specific soils and geologic reports for development in areas of serious geologic risk.

Program SAF 2.1.1.5: In areas of serious geologic risk, prohibit development unless seismic and geologic hazards can be reduced to reasonable levels.

Program SAF 2.1.1.6: Monitor and enforce structural safety standards to reduce risks for seismic and geologic hazards.

Program SAF 4.1.1.1: Conduct a vulnerability analysis of critical infrastructure with regards to seismic events.

Applicable Regulations:

Seismic Hazards Mapping Act

Alquist-Priolo Earthquake Fault Zoning Act

California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 2 THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT IN DIRECTLY OR INDIRECTLY CAUSING POTENTIAL SUBSTANTIAL ADVERSE EFFECTS, INCLUDING THE RISK OF LOSS, INJURY, OR DEATH INVOLVING STRONG SEISMIC GROUND SHAKING.

Seismic hazard mapping shows that the City has a low seismic hazard potential yet is at moderate risk for earthquake vulnerability. McFarland has a 25% to 30% chance of experiencing an earthquake greater than magnitude 5.0 within the next 20 years and a 50% to 60% chance of experiencing an earthquake greater than magnitude 5.0 within the next 30 years. Therefore, the proposed buildout of the Plan would place few to no properties in danger of collapse or lives at risk due to ground shaking. The Plan addresses seismic considerations in its goals, policies, and programs in the Safety Element.

Policy SAF 2.1.1: Encourage reduction in the risk of loss of life, personal injury and damage to property resulting from geologic and seismic hazards.

Program SAF 2.1.1.1: Coordinate with McFarland Public Works Department to organize and publicize educational events.

Program SAF 2.1.1.2: Educate residents on ways to mitigate injury and damage associated with earthquakes in their homes.

Program SAF 2.1.1.3: Using the latest building codes adopted by the State of California, incorporate geotechnical hazard data in land use decision making, site design, and construction.

Program SAF 2.1.1.4: Encourage site-specific soils and geologic reports for development in areas of serious geologic risk.

Program SAF 2.1.1.5: In areas of serious geologic risk, prohibit development unless seismic and geologic hazards can be reduced to reasonable levels.

Program SAF 2.1.1.6: Monitor and enforce structural safety standards to reduce risks for seismic and geologic hazards.

Program SAF 4.1.1.1: Conduct a vulnerability analysis of critical infrastructure with regards to seismic events.

Applicable Regulations:

Seismic Hazards Mapping Act

Alquist-Priolo Earthquake Fault Zoning Act

California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 3 THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT IN DIRECTLY OR INDIRECTLY CAUSING POTENTIAL SUBSTANTIAL ADVERSE EFFECTS, INCLUDING THE RISK OF LOSS, INJURY, OR DEATH INVOLVING SEISMIC RELATED GROUND FAILURE, INCLUDING LIQUEFACTION.

Liquefaction is the conversion of soil into a fluid-like state. McFarland is not within an area identified as having the potential for liquefaction. Therefore, the probability of loss of life or property due to liquefaction is low. The Plan addresses seismic considerations in its goals, policies, and programs in the Safety Element.

Policy SAF 2.1.1: Encourage reduction in the risk of loss of life, personal injury and damage to property resulting from geologic and seismic hazards.

Program SAF 2.1.1.3: Using the latest building codes adopted by the State of California, incorporate geotechnical hazard data in land use decision making, site design, and construction.

Program SAF 2.1.1.4: Encourage site-specific soils and geologic reports for development in areas of serious geologic risk.

Program SAF 2.1.1.5: In areas of serious geologic risk, prohibit development unless seismic and geologic hazards can be reduced to reasonable levels.

Program SAF 2.1.1.6: Monitor and enforce structural safety standards to reduce risks for seismic and geologic hazards.

Program SAF 4.1.1.1: Conduct a vulnerability analysis of critical infrastructure with regards to seismic events.

Applicable Regulations:

Seismic Hazards Mapping Act

Alquist-Priolo Earthquake Fault Zoning Act

California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 4 THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT IN DIRECTLY OR INDIRECTLY CAUSING POTENTIAL SUBSTANTIAL ADVERSE EFFECTS, INCLUDING THE RISK OF LOSS, INJURY, OR DEATH INVOLVING LANDSLIDES.

Earthquake-induced landslide and slope failure occurs when steep slopes composed of weak materials fail because of ground shaking caused by an earthquake. McFarland is not in an area identified as having the potential for earthquake-induced landslide or slope failure. Therefore, buildout of the proposed Plan will create less-than-significant risk to landslides. The Plan addresses landslides in its goals, policies, and programs in the Safety Element.

Policy SAF 2.1.1: Encourage reduction in the risk of loss of life, personal injury and damage to property resulting from geologic and seismic hazards.

Program SAF 2.1.1.3: Using the latest building codes adopted by the State of California, incorporate geotechnical hazard data in land use decision making, site design, and construction.

Program SAF 2.1.1.4: Encourage site-specific soils and geologic reports for development in areas of serious geologic risk.

Program SAF 2.1.1.5: In areas of serious geologic risk, prohibit development unless seismic and geologic hazards can be reduced to reasonable levels.

Program SAF 2.1.1.6: Monitor and enforce structural safety standards to reduce risks for seismic and geologic hazards.

Program SAF 4.1.1.1: Conduct a vulnerability analysis of critical infrastructure with regards to seismic events.

Applicable Regulations:

Seismic Hazards Mapping Act

Alquist-Priolo Earthquake Fault Zoning Act

California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 5 THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT RESULT IN SUBSTANTIAL SOIL EROSION OR THE LOSS OF TOPSOIL.

McFarland's largest economic sector is agriculture. While most agricultural operations take place outside the built-up area buildout of the proposed Plan could create less-than-significant loss of topsoil. The Plan addresses soils in its goals, policies, and programs in the Safety Element and Sustainable Agriculture Element.

Program SAF 2.1.1.3: Using the latest building codes adopted by the State of California, incorporate geotechnical hazard data in land use decision making, site design, and construction.

Program SAF 2.1.1.4: Encourage site-specific soils and geologic reports for development in areas of serious geologic risk.

Policy AG 2.1.1: Assess potential impacts of development on agricultural lands.

Program AG 2.1.1.1: Evaluate project impacts on neighboring agricultural lands when approving new developments

Program AG 2.1.1.2: Evaluate Williamson Act contracts within and near City limits and evaluate alternative soil conservation land uses on Prime Farmlands.

Program AG 2.1.1.3: Prioritize the procurement of non-Williamson Act agricultural lands for annexation.

Applicable Regulations:

Seismic Hazards Mapping Act

Alquist-Priolo Earthquake Fault Zoning Act

California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 6 THE PROPOSED PLAN WOULD POSE A LESS-THAN-SIGNIFICANT IMPACT FROM LOCATION 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

Earthquake-induced landslide and slope failure occur when steep slopes composed of weak materials fail because of ground shaking caused by an earthquake. McFarland is not in an area identified as having the potential for earthquake-induced landslide or slope failure. Liquefaction is the conversion of soil into a fluid-like state. McFarland is not within an area identified as having the potential for liquefaction.

Subsidence occurs when land is displaced vertically. Ground shaking can accelerate ground failure in areas affected by subsidence. Subsidence typically occurs due to the withdrawal of groundwater, oil, natural gas, or other resource extractive activities. The nearby City of Delano experienced subsidence caused largely by groundwater pumping of the deep aquifer system during the 1950s and 1960s. McFarland is at risk for future ground failure (landslides, slope failure, subsidence), as it is affected by subsidence with seismic ground shaking due to historic water withdrawal, and existing subsidence conditions. The Plan addresses ground failures in its goals, policies, and programs in the Safety Element. The Plan also addressed issues with groundwater management in the Conservation and Sustainable Agriculture Elements.

Policy SAF 2.4.3: Identify groundwater recharge locations where soil and geography allow for infiltration.

Program SAF 2.4.3.3: Identify and evaluate potential land holdings to be purchased and used as spreading ponds

Program CON 2.1.2.3: Prepare an urban water management plan (UWMP) as population grows and the City's service area expands to comply with SB 7X-7 (Water Conservation Act of 2009). Develop the plan to decrease water use in public landscapes by 25% of 2018 levels by 2035. Convert existing landscapes to drip systems and replace landscapes requiring significant irrigation with drought tolerant vegetation.

Program PF 1.1.1.1: Continue monitoring water quality in accordance with SSJMUD monitoring standards and publish results as available.

Objective AG 2.4: Achieve groundwater sustainability by 2040

Policy AG 2.4.1: Collaborate and maintain consistency with SSJMUD Management Area Plan

Program AG 2.4.1.1: Encourage participation in SSJMUD In-Lieu Recharge Incentive Program.

Program AG 2.4.1.2: Encourage improvements to individual farming operations that address water use efficiency through SSJMUD On-Farm Efficiency Incentive Program
Program AG 2.4.1.3: Encourage improvements to individual farming operations that address groundwater protection and recharge through SSJMUD On-Farm Recharge Activities Incentive Program.
Program AG 2.4.1.4: Prioritize conversion of lands with lower agricultural potential and non-Williamson Act contract lands from agricultural use to urban use as necessary to accommodate growth.
Program AG 2.4.1.5: Encourage participation in SSJMUD in-District Allocation Structure, which would allow for the transfer of groundwater pumping credits within the District.
Program AG 2.4.1.6: Support SSJMUD to develop and implement a voluntary land fallowing program during droughts when the District may not be able to meet in-District demand from increases in the volume of imported water.
Program AG 2.4.1.7: Support SSJMUD in imposing restrictions that limit groundwater pumping when the District or the entire Subbasin are nearing a condition where they are unable to meet sustainable management criteria even with the implementation of the projects and management actions in the SSJMUD Management Area Plan.

Program AG 3.1.1.1: Encourage water-saving measures in farming through user education in McFarland and its sphere of influence to reduce water use and maintain groundwater levels.

Applicable Regulations:

California Building Standards Code

Sustainable Groundwater Management Act (2014)

The Water Conservation Act of 2009 (Senate Bill X7-7)

Responsible Water Use And Conservation Act of 2016 (SB 7)

Water Management Planning Acts of 2018 (Assembly Bill (AB) 1668 & Senate Bill (SB) 606)

Significance Before Mitigation: Less than significant

GEO – 7 THE PROPOSED PLAN WOULD POSE A LESS-THAN-SIGNIFICANT IMPACT FROM LOCATION 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.

Expansive soils are defined as soils with an expansion index greater than twenty, as determined by the Expansive Index Test Standard Number 29.2, Chapter 70, of the Uniform Building Code. Soils susceptible to expansion are high in clay content as they are able to absorb and retain water leading to volume

disparities between wet and dry states. The City of McFarland contains sandy soils with little or no clay content (Olive et al., 1989) which will not expand when inundated with water. Therefore, buildout of the proposed Plan creates less-than-significant risk of loss of life or building damage due to location on expansive soils. The Plan addresses mitigation for expansive soils in its goals, policies, and programs in the Safety element.

Program SAF 2.1.1.4: Encourage site-specific soils and geologic reports for development in areas of serious geologic risk.

Program SAF 2.1.1.5: In areas of serious geologic risk, prohibit development unless seismic and geologic hazards can be reduced to reasonable levels.

Program SAF 2.1.1.6: Monitor and enforce structural safety standards to reduce risks for seismic and geologic hazards.

Policy AG 2.2.1: Maintain healthy and productive soils

Program AG 2.2.1.1: Disseminate educational information to farmers on best management practices related to crop rotation to ensure long term yield and soil quality.

Program AG 2.2.1.2: Adopt a community composting program to help support healthy soils.

Program AG 2.2.1.3: Evaluate the prospects of reducing monocultures to reduce soil degradation.

Applicable Regulations:

California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 8 THE PROPOSED PLAN WOULD POSE A LESS-THAN-SIGNIFICANT IMPACT FROM LOCATION ON SOILS INCAPABLE OF ADEQUATELY SUPPORTING THE USE OF SEPTIC TANKS OR ALTERNATIVE WASTEWATER DISPOSAL SYSTEMS WHERE SEWERS ARE NOT AVAILABLE FOR THE DISPOSAL OF WASTEWATER.

The City of McFarland relies primarily on the collection and treatment of wastewater through a city-wide sewer system. The City does not rely heavily on the use of septic tanks. In the event that septic tanks are needed to collect waste-water, the nature of the soil in McFarland would adequately support septic tank infrastructure. Soils used for septic tank systems should be highly permeable to facilitate the absorption of effluent from septic tanks (Bender, 1964). Soils in McFarland are dominated by sand and are well

drained. Should the City decide to utilize septic tank systems in development proposed by the Plan, the soils would adequately support the systems. The Plan addresses sewage disposal in its goals, policies, and programs within its Public Facilities element.

Policy PF 1.2.2: Accommodate future need for sewage infrastructure.

Program PF 1.2.2.1: Examine existing sewage capacity and project increases in use.

Program PF 1.2.2.2: Expand sewer facilities in Eastern McFarland, including the construction of a new wastewater treatment plant.

Applicable Regulations: California Building Standards Code

Significance Before Mitigation: Less than significant

GEO – 9 THE PROPOSED PLAN WOULD POSE A LESS-THAN-SIGNIFICANT IMPACT FROM DIRECTLY OR INDIRECTLY DESTROYING A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGICAL FEATURE.

McFarland is not known to have paleontological resources. However, construction activities associated with buildout of the proposed Plan could result in unearthing paleontological resources in the plan area. Therefore, the potential for encountering such resources could exist in somewhere in the plan area.

In anticipation of this slim eventuality, the City of McFarland shall implement the policy: in the event that archeological or paleontological resource is unearthed or otherwise discovered during construction related activities associated with the proposed Plan, all work must be suspended until a qualified archeologist is consulted.

Significance After Mitigation: Less than significant

Applicable Regulations:

California Building Standards Code

Government Code section 15064.5

Significance Before Mitigation: Less than significant

4.6.4 Summary of Potential Impacts and Mitigation Measures

The proposed Plan would result in less-than-significant impacts to geology and soils, with no mitigation measures needed.

4.6.5 References

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4.7 Greenhouse Gas Emissions

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs?			X	

4.7.1 Environmental Setting

This section summarizes existing conditions in the City of McFarland, CA relating to greenhouse gas emissions and evaluates all potential greenhouse gas (GHG) emissions associated with the City of McFarland 2040 General Plan. This section analyzes all potential GHG emissions associated with the goals, policies and objectives included in the General Plan. This analysis considers GHG emissions under existing conditions as well as projected buildout conditions of the 2040 General Plan.

4.7.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the potential impacts of GHG emission as a result of the proposed Plan.

Federal regulations

Environmental Protection Agency

In 2009, the Environmental Protection agency established the Mandatory Reporting of GHG rule which required all large stationary emitters (25,000 MTCO2e/yr. or above) to report annual emissions data. The EPA requires reporting on six key greenhouse gases – CO2, CH4, N20, and HFC's PFC's and SF6.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy (CAFÉ) standard was enacted in 1975, in an effort to improve vehicle fuel efficiency in the U.S. The law regulated emissions for passenger vehicles, light trucks, vans, and SUV's. The CAFÉ standards were most recently updated in 2011 to increase requirements to an average fuel economy standard of 35.5 miles per US gallon by 2016 (39 mpg for cars and 30 mpg for trucks).

State regulations

Senate Bill 375 Sustainable Communities And Climate Protection Act Of 2008

SB 375 is intended to expand efforts included in AB 32 by reducing transportation related greenhouse gas emissions and inefficient land use patterns. The legislation encourages jurisdictions to plan growth consistent with a "Sustainable Communities Strategy" which allows exemption from certain environmental review processes in CEQA. The "Sustainable Communities Strategy" are developed and adopted my metropolitan planning organization (MPO) or a similar agency and serve to guide transportation, housing, and land use policy to reduce greenhouse gas emissions associated with these activities while allowing for efficient and financially feasible alternatives.

Senate Bill 32 Global Warming Solution Act Of 2006

SB 32 was originally established as the California Global Warming Solutions Act of 2006. The bill established the California Air Resource Board as the agency responsible for monitoring and regulating greenhouse gas emissions statewide as well as establishing GHG reduction targets. Original targets were set as statewide GHG reductions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. In 2016, the California Global Warming Solutions Act of 2006 was updated through the California state senate to increase reduction targets to 40 percent below 1990 emissions levels by 2030.

Assembly Bill 1493 (2002)

AB 1493, known commonly as the Pavely emissions standards, requires higher fuel efficiency standards for new passenger vehicles made between 2009 and 2016. The measure is expected to reduce 20% of GHGs from new passenger vehicles sold in California. In 2012, CARB who is responsible for regulatory oversight of the bill, established new fuel efficiency standards for passenger vehicles sold in California between 2017 and 2025. Under the Advanced Clean Car Program implementation mechanism, the bill will achieve 34% fewer GHG emissions and 75 percent fewer smog-forming emissions from passenger vehicles in California.

Renewable Portfolio Standard (Senate Bills 1078, 107 And 32)

The three pieces of legislation pertaining to California's renewable portfolio standard for electricity production in California first established as 20% of California's electricity production coming from renewable sources (wind, small hydropower, solar, geothermal, biomass, and biogas) by 2020. In 2015, SB 350 was passed, requiring retail sellers and California investor-owned utilities to procure 50 percent of their electricity sold from eligible renewable resources by 2030.

Senate Bill 32

In 2016, the California State Assembly updated the California Global Warming Solutions Act of 2006 by passing SB 32, establishing more aggressive greenhouse gas reduction targets for California. SB 32 increases the state's greenhouse gas reduction targets, requiring California to reduce GHG emissions 40% below 1990 levels by 2030. As part of the legislation, the California Air Resources Board is tasked with developing a 2017 Scoping Plan Update which provides a roadmap for achieving the targets set in SB 32. The Scoping Plan Update provides guidance for setting plan-level greenhouse as targets that would remain consistent with the 2017 Scoping Plan update. CARB recommends that local plans set community-wide emissions reduction targets to reduce emissions to no more than six metric tons CO2e per capita by 2030 and no more than two metrics tons CO2e by 2050.

Local regulations

Kern Council of Governments 2014 Regional Transportation Plan/ Sustainable

Communities Strategy

The 2014 Regional Transportation Plan (RTP) sets forth regional transportation goals, policies, and actions for Kern County through the year 2030. In accordance with SB 375, the Plan includes a Sustainable Communities Strategy that reduces emissions from passenger and light-duty trucks by 5% per capita by 2020 and 10% by 2035 (Kern COG, 2014).

Kern County Greenhouse Gas Inventory

In 2012, Kern County conducted a greenhouse gas inventory to determine community wide emissions in 2005 and a business-as-usual forecast from 2005-2020. The distribution of emissions and the BAU forecast will help the City of McFarland determine the General Plan's potential impacts on greenhouse gas emissions. San Joaquin Valley Air Pollution Control District SJVAPCD adopted a Climate Change Action Plan (CCAP) in August 2008. While the plan does not have regulatory powers, it directs SJVAPCD to develop guidance to assist District staff, valley businesses, land-use agencies, and other permitting agencies in addressing GHG emissions as part of the CEQA process. The CCAP also directs District staff to investigate and develop a greenhouse gas banking program, enhance the existing emissions inventory process to include greenhouse gas emissions reporting consistent with new state requirements, and administer voluntary greenhouse gas emission reduction agreements. The CCAP Final Draft Staff Report concludes that while existing science is inadequate to support characterization of impacts that project specific GHG

emissions have on global climatic change, the cumulative impact of all the projects is best addressed by requiring all projects subject to CEQA to reduce their GHG emissions through project design elements.

Since the adoption of the CCAP, SJVAPCD has published Best Performance Standards (BPS) for stationary sources and development projects, and guidance for valley land-use agencies in addressing GHG emissions for new projects under CEQA. However, the District has not published guidance related to large scale, long range planning projects such as General Plans.

4.7.1.2 Existing and baseline Conditions

A greenhouse gas (GHG) emissions inventory quantifies the amount of greenhouse gases a jurisdiction releases into the atmosphere for a given year. GHGs include carbon dioxide, methane, fluorinated gases, and nitrous oxide, and sources include transportation, energy production and distribution, and water conveyance and treatment, as well as the built environment. The greenhouse effect, according to the 2007 IPCC background report, occurs when GHGs [contribute] to climate change by absorbing and trapping the amount of radiation (heat) that resides inside the Earth's atmosphere," producing the warming effect. The regions around the world are affected differently by this phenomenon, Earth is experiencing a general warming that carries catastrophic consequences for all species, including lasting effects on human settlements and social structures.

To address mounting climate concerns, local governments in California are mandated by Assembly Bill 32 to reduce their greenhouse gas emissions to 1990 levels by 2020 and to 80% below 1990 levels by 2050. The OPR General Plan Guidelines require that a GHG inventory be included for every General Plan update in the San Joaquin Valley.

Prior to 2021, the City of McFarland had never created a GHG inventory. Emissions of GHGs in the City mostly come from vehicles and energy sources across residential and commercial sectors, and can be released through transportation, electricity, water, and gas use, commercial and industrial uses, and construction and agricultural activities. GHG emissions not only contribute to the warming of the planet, but they are also associated with dust and odors that contribute to local air pollution and endanger human health.

4.7.1.3 GHG Emissions Inventory

Emissions Model

The California Emissions Estimator Model® (CalEEMod) model offers a uniform platform for government agencies, land use planners, and environmental professionals statewide to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and removal, and water use. Furthermore, the model enables

the user to identify mitigation measures that can reduce criteria pollutant and GHG emissions. The model also estimates vehicle miles travelled. [http://www.caleemod.com/]

The model's capabilities enabled testing of multiple future growth scenarios included in the development of a general plan. At one end of the spectrum is the Business-As-Usual scenario, which represented a future with little to no attempt to mitigate the effects of traditional land use practices and lifestyles. At the other end of the spectrum is the General Plan, which included proposals for: infill and compact development including accessory dwelling units in the built-up area; expansion of alternative modes of transportation including public transit use, biking, and walking; and deliberate placement of land uses to enhance accessibility. The results of the analyses that follow emphasize the comparison between these two extremes of future visions for the City.

Comparative Emissions Estimates

Table 4.7-1 shows that the 2040 McFarland General Plan would register at least 12 percent reduction in GHG emissions per year in comparison with the Business-As-Usual scenario; this is largely from the more compact and user-centric placement of uses. When other proposals for alternative modal choices and enhanced accessibility add up to the land use placements, the General Plan would register a 45 percent reduction in GHG emissions per year in comparison with the Business-As-Usual scenario. Figure 4.7-1 compares CO2-equivalent (CO2e) levels under the two scenarios. Figure 4.7-2 depicts the estimated change in CO2s levels.

TABLE 4.7-1: COMPARATIVE ANNUAL GHG EMISSIONS

Type of Estimate	Business-As-Usual	General Plan	Change	%Change
Construction (max Year): Unmitigated	45,948	47,584	1,636	4%
Construction (max Year): Mitigated	45,948	47,584	1,636	4%
Operational (Total): Unmitigated	811,800	716,405	-95,395	-12%
Operational (Total): Mitigated	811,800	444,473	-367,327	-45%

FIGURE 4.7-1: CO2-EQUIVALENT LEVELS UNDER BUSINESS-AS-USUAL VS. GENERAL PLAN SCENARIOS

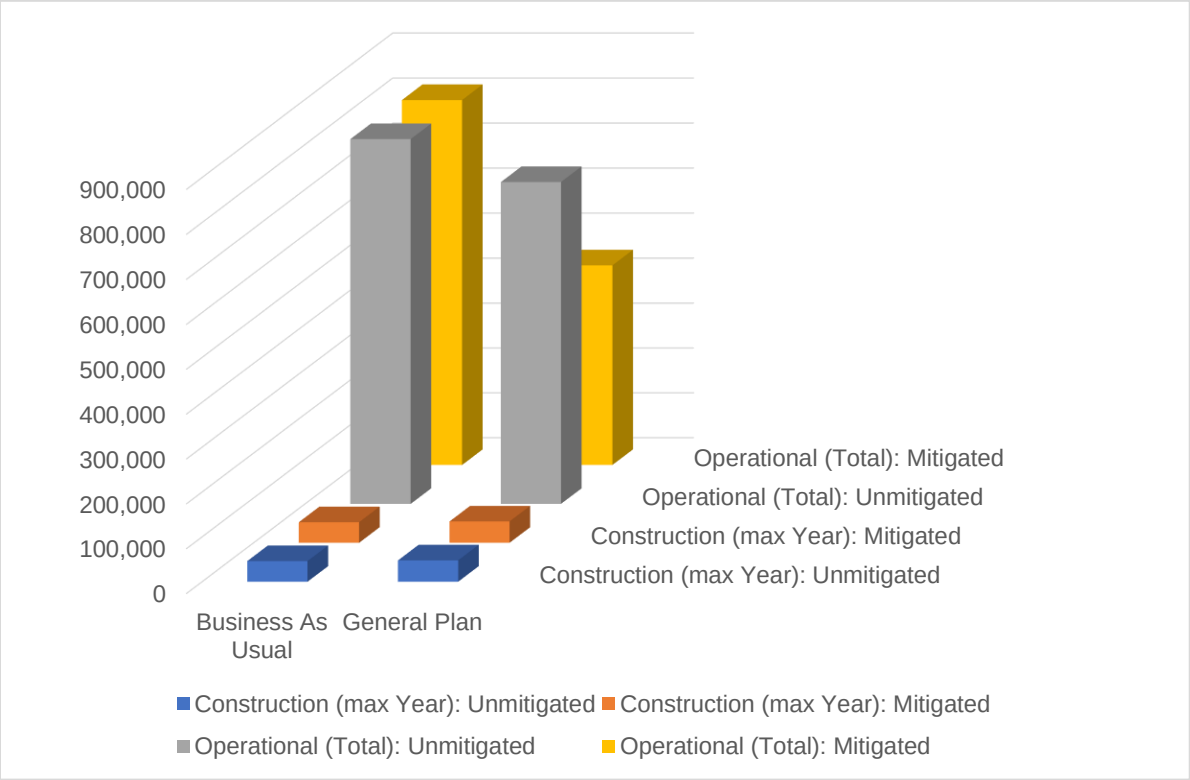
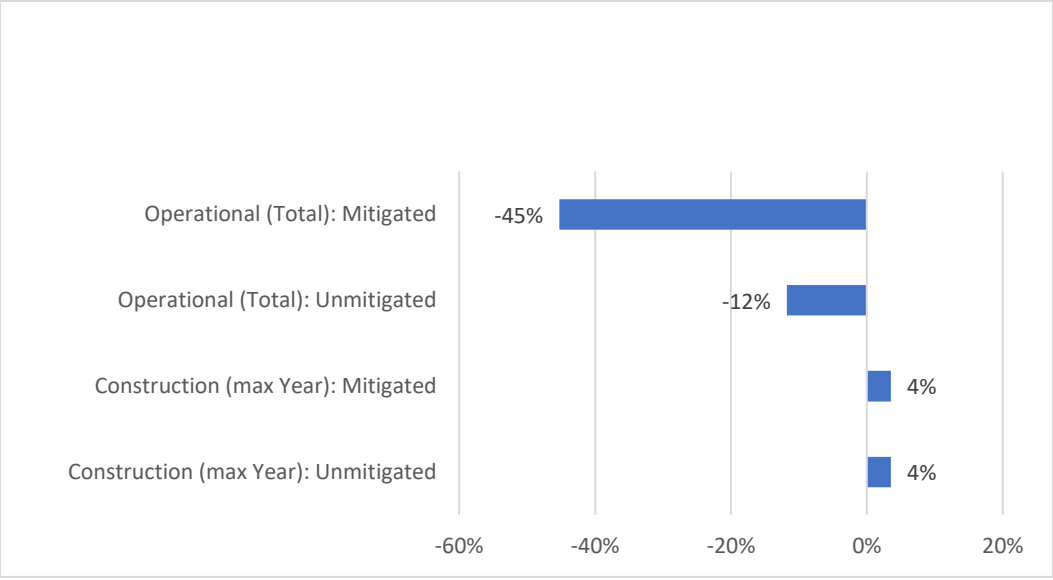


FIGURE 4.7-2: CO2E CHANGE IN GENERAL PLAN FROM BUSINESS-AS-USUAL



Comparative VMT Estimates

Table 4.7-2 shows the comparative VMT estimates for weekdays, weekend days, and the full year. Like the GHG emissions, the estimates recognize an 8 percent annual reduction in VMT under the 2040 McFarland General Plan proposals compared to the Business-As-Usual scenario largely from its configuration. Including additional mitigations for accessibility and alternative travel would significantly reduce annual VMT by 65 percent. Figure 4.7-3 compares VMT levels under the two scenarios. Figure 4.7-4 depicts the estimated change in VMT levels.

It is worth noting that the Traffic Section of this document estimated VMT via a different procedure for various growth scenarios investigated during preparation of the General Plan. Results yielded comparative average VMT levels and reductions from Business-As-Usual that are consistent with the results from the CalEEMod model.

TABLE 4.7-2: COMPARATIVE VMT ESTIMATES

Type of VMT Estimate	Business-As-Usual	General Plan	Change (GP-BAU)	%Change
Weekday	775,904	587,926	-187,978	-24%
Saturday	626,194	369,270	-256,924	-41%
Sunday	372,170	239,843	-132,326	-36%
Annual VMT: Unmitigated	1,129,378,439	1,038,484,916	-90,893,523	-8%
Annual VMT: Mitigated	1,129,378,439	397,012,659	-732,365,780	-65%

FIGURE 4.7-3: VMT LEVELS UNDER BUSINESS-AS-USUAL VS. GENERAL PLAN SCENARIOS

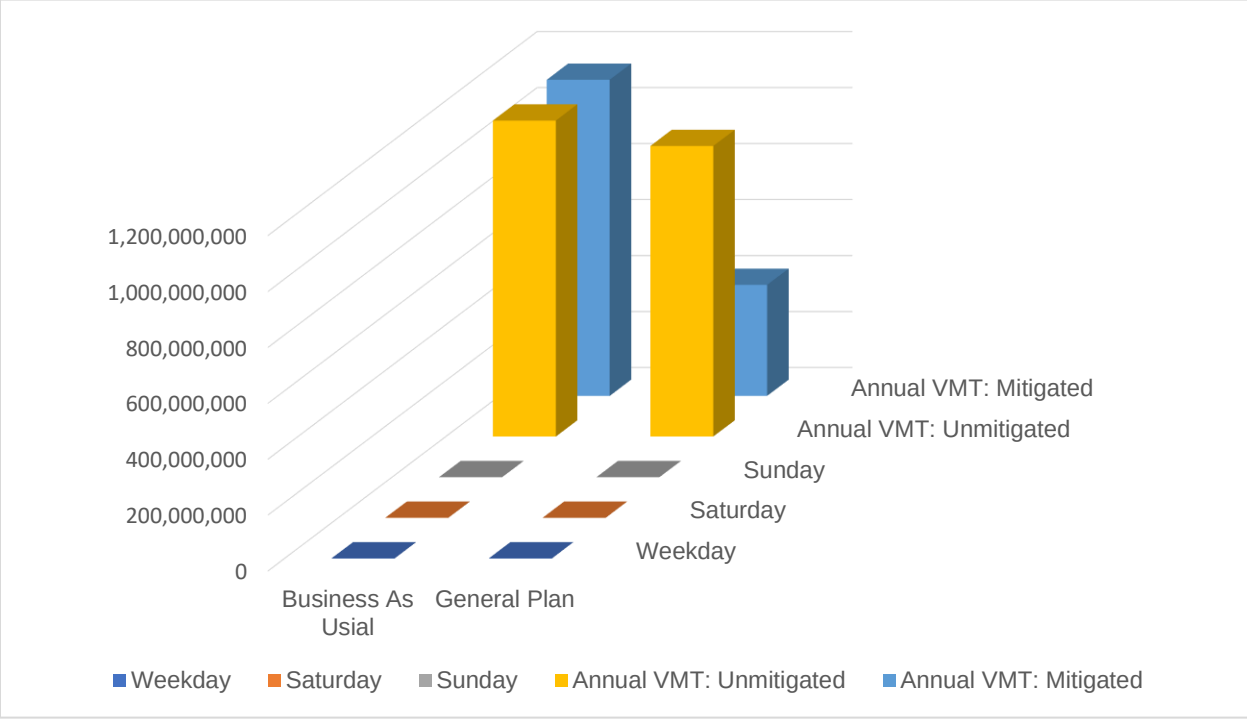
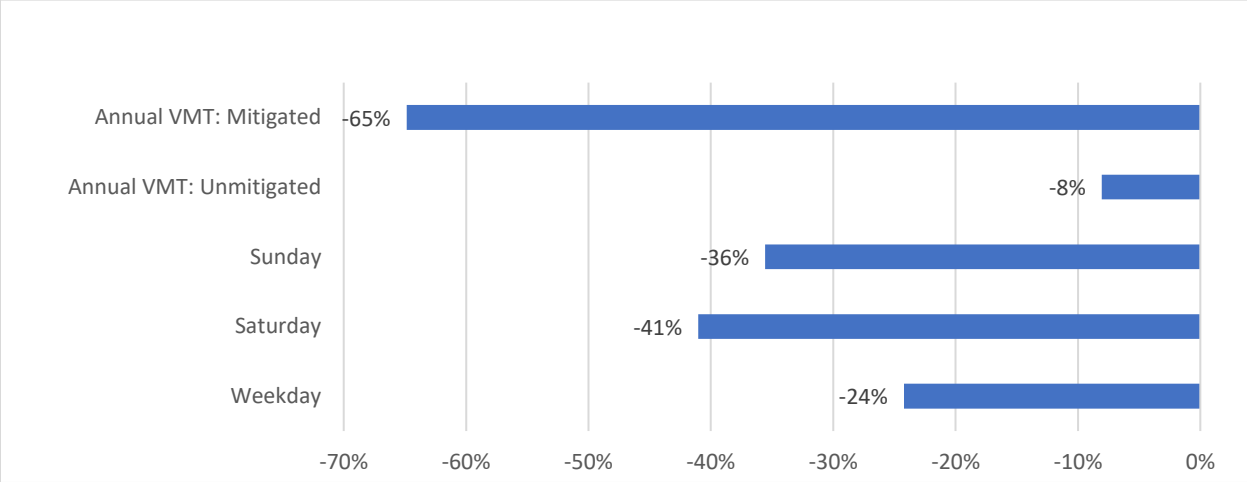


FIGURE 4.7-4: VMT REDUCTION IN GENERAL PLAN FROM BUSINESS-AS-USUAL



4.7.2 STANDARDS OF SIGNIFICANCE

This section discusses the standard of significance in determining whether build-out of the City of McFarland 2040 General Plan will have a significant impact on the environment as it relates to greenhouse gas emissions.

4.7.2.1 CEQA THRESHOLDS

Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018) provides thresholds of significance for greenhouse gas emissions impacts created by projects or programs. The thresholds of significance for air quality asks if the project would:

1. Generate GHG 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 emission of GHGs.

4.7.2.2 METHODOLOGY

While there is no official state guidance available for determining the thresholds of significance for greenhouse gas emissions impacts, the California Governor's Office of Planning and Research (OPR) suggests that lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage, and construction activities. Public

agencies should consider the following when determining significance of a proposed project on greenhouse gas emissions and the environment.

1. **Identify GHG Emissions on Climate Change**. When assessing a project's GHG emissions and its effects on climate change, lead agencies must describe the existing environmental conditions or setting without the project, which normally constitutes the baseline physical conditions for determining whether a project's impacts are significant. (OPR notes that the potential effects may not be individually significant, therefore it is required to include a consideration of cumulative impacts. Any dismissal of significance must be fully documented and supported). An impact is significant if GHG emissions contribute to climate change.
2. **Determine a Timeframe.** For a long range plan the timeframe is between ten and twenty years. The McFarland Plan was looking at outside timeframe of about twenty years with the expectation that an update could occur after a decade if conditions require it.
3. **Reflect Scientific Knowledge and Regulatory Schemes.** GHG emissions as a result of the Plan should comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Conflicts with any local, regional, state, or federal policies regarding greenhouse gas emissions is considered a significant impact.

4.7.3 Impact Discussion

GHG – 1 The proposed Plan would generate GHG emissions, either directly or indirectly, that would have a LESS-THAN-SIGNIFICANT impact on the environment.

As a result of a series of comprehensive and progressive goals included in various elements of the City of McFarland 2040 General Plan which focus on greenhouse gas reductions specifically, the proposed plan will not have a significant impact on the environment as it relates to greenhouse gas emissions. In fact, the plan will result in a 12 percent reduction in GHG emissions per year compared to the Business-As-Usual scenario. Goals, policies, and programs included in the Circulation, Air Quality and Conservation Elements of the 2040 General Plan Update specifically address issues related to greenhouse gas emissions and strategies to reduce greenhouse emissions associate with certain activities including energy procurement, transportation, and waste.

Policy CIR 1.1.2: Prioritize funding to improve and maintain pedestrian infrastructure for users.

Program CIR 1.1.2.1: Adapt Complete Streets Guidebook for local use.

Program CIR 1.1.2.3: Seek funding from federal and state sources.

Policy CIR 1.2.1: Connect all bicycle infrastructure.

Program CIR 1.2.1.1: Establish separated bike lanes on Garzoli Avenue, Mast Avenue, Sherwood Avenue, Kern Avenue, and Browning Road to connect McFarland's southern neighborhoods with its downtown, eastern, and northern neighborhoods.

Policy CIR 1.2.2: Encourage inclusion of bicycle parking facilities in new development.

Program CIR 1.2.2.1: Amend development code to include bicycle parking requirements.

Policy CIR 2.2.1: Implement a balanced, multi-modal transportation network in accordance with Complete Street requirements.

Program CIR 2.2.1.1: Update the City's street and subdivision standards to include Complete Streets strategies.

Policy CIR 3.3.1: Support adoption of zero-emission and low-emission vehicles.

Program CIR 3.3.1.1: Standardize infrastructure regulations for public electric vehicle charging stations.

Program CIR 3.3.1.2: Streamline the permit process for private electric vehicle charging stations (including home charging stations).

Program CIR 3.3.1.3: Provide facilities such as advanced fueling stations (e.g., electric and hydrogen) for emerging technologies.

Policy CON 2.1.2: Decrease water use in new and existing developments.

Program CON 2.1.2.2: Use drip irrigation systems and drought tolerant or native vegetation in newly developed areas.

Program CON 2.1.2.3: Develop a plan to decrease water use in public landscapes by 25% of 2018 levels by 2035. Convert existing landscapes to drip systems and replace landscapes requiring significant irrigation with drought tolerant vegetation.

Program CON 2.1.2.5: Measure the success of current water conservation programs and utilize data in future programs and ordinances.

Policy CON 2.2.1: Conduct a sun and shade study to locate the most optimal locations for solar panel installation.

Policy CON 2.3.1: Educate the public on the importance of energy-saving techniques.

Policy CON 2.3.2: Seek opportunities to improve energy efficiency within City facilities.

Program CON 2.3.2.1: Conduct energy efficiency and water use audits on all City facilities and create a schedule to prioritize implementation of the most cost-effective efficiency measures.

Policy AQ 1.1.1: Coordinate with the San Joaquin Valley Air Pollution Control District ("Air District") to identify air pollution reduction progress and key contributors to air pollution.

Policy AQ 1.2.1: Meet attainment status for criteria pollutants according to National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality standards (SAAQS).

Policy AQ 1.4.2: Establish an urban forestry program to improve air quality by requiring new development and street resurfacing plans to include street and shade trees.

Objective AQ 2.1: Reduce greenhouse gas emissions to 40% below 1990 emission levels by 2030 and 80% below 1990 emission levels by 2050.

Policy AQ 2.1.1: Conserve and reduce energy use.

Program AQ 2.1.1.1: Develop energy conservation opportunities.

Program AQ 2.1.1.2: Establish energy conservation requirements for development (e.g., energy efficient light bulbs).

Program AQ 2.1.1.3: Apply neighborhood conservation strategies such as code enforcement and building rehabilitation.

Policy AQ 2.1.2: Develop renewable energy.

Program AQ 2.1.2.1: Invest in sources of renewable energy.

Policy AQ 2.1.3: Establish a baseline of current emissions levels and project emissions estimates for future years.

Program AQ 2.1.3.1: Conduct a greenhouse gas inventory.

Program AQ 2.1.3.2: Adopt emissions reduction strategies through a Climate Action Plan.

Policy AQ 2.1.4: Reduce vehicle emissions.

Policy AQ 2.1.5: Prioritize mixed-use and walkable neighborhoods in future developments.

Program AQ 2.1.5.1: Streamline permitting processes for mixed-use and walkable development projects.

Policy PF 2.2.1: Expand recycling and composting citywide.

Policy PF 6.2.1: Follow priorities outlined in the Circulation Element of the General Plan.

Program PF 6.2.1.2: Improve safe student access to schools with Safe Routes to School grants.

Applicable Regulations:

SB 32

SB 375

AB 1493

Significance Before Mitigation: Less than significant

GHG – 2 THE PROPOSED PLAN WILL POSE A LESS-THAN-SIGNIFICANT CONFLICT WITH AN APPLICABLE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSION OF GHGS.

The City of McFarland 2040 General Plan Update comprehensively recognizes and responds to relevant legislation regarding greenhouse gas emission reductions in pertinent elements of the Plan and incorporates corresponding policies and programs to achieve legislative mandates, regulations, and goals

specific to various sectors including transportation, land use, solid waste, renewable energy, energy efficiency and water use. Objectives and policies included in the Air Quality Element of the Plan specifically discuss California legislation regarding greenhouse gas emissions reduction targets of AB 32 - Global Warming Solutions Act of 2006, including meeting greenhouse gas emissions reduction targets established in the legislation. The Plan does not conflict with state legislation regarding greenhouse gas emissions reduction targets. Consistent with the 2017 Climate Change Scoping Plan Update, the General Plan sets goals and polices towards achieving the GHG reductions in AB 32 and reduce per capita GHG emissions to no more than six metric tons CO2e per capita by 2030. The Plan addresses conflict with other plans and regulations in the goals, policies, and programs that follow.

Policy AQ 1.2.1: Meet attainment status for criteria pollutants according to National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality standards (SAAQS).

Objective AQ 2.1: Reduce greenhouse gas emissions to 40% below 1990 emission levels by 2030 and 80% below 1990 emission levels by 2050.

Program AQ 1.4.1.1: Develop coordinated land use and transportation plans to help meet federal, state, and local air quality requirements.

Program AQ 1.4.1.2: Work with Caltrans and the Regional Transportation Planning Agency to minimize the air quality impacts of large-scale transportation projects.

Program AQ 1.4.1.3: Encourage submission of development projects to the Air District for CEQA comments and review of air quality analysis.

Program AQ 1.4.1.4: Determine project air quality impacts using analysis methods and significance thresholds recommended by the Air District.

Applicable Regulations:

SB 32

SB 375

AB 1493

Significance Before Mitigation: Less than significant

4.7.4 Summary of Potential Impacts and Mitigation Measures

The analysis on the potential greenhouse gas emissions impacts resulting from implementation of the City of McFarland 2040 General Plan found that the Plan will have a less than significant impact on the environment and remains consistent with state legislation regarding greenhouse gas emission reduction targets. Land use intensity and compactness with associated multimodal circulation system together with policies included in the Air Quality Element of the Plan serve to specifically address potential greenhouse gas impacts and require consistency with greenhouse gas emission reduction targets included in AB 32. The Plan does not conflict with state legislation regarding greenhouse gas emissions reduction targets and maintains consistency with the 2017 Climate Change Scoping Plan Update.

To reach the greenhouse gas emission reduction targets in the 2017 Scoping Plan the City of McFarland will have to consistently track annual greenhouse gas emissions from community wide and government operations as included in the policies of the Plan. It is recommended the City of McFarland devotes staff or consultant resources toward a biennial greenhouse gas emissions inventory as well as the development and adoption of a Climate Action Plan.

4.7.5 References

Association of Environmental Planners, (2016) California Environmental Quality Act (CEQA) Statute and Guidelines

Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines (May 2012) - http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/baaqmd-ceqa-guidelines_final_may-2012.pdf?la=en

California Air Resources Board. (2017) Climate Change Scoping Plan Update, January 2017 Retrieved from https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

City of McFarland, CA. (2020). City of McFarland General Plan Update Background Report. McFarland, CA.

City of McFarland CA. (2020). Draft City of McFarland 2040 General Plan. McFarland, CA.

ICLEI. (October 2012) U.S. Community Protocol for Accounting and Reporting of Greenhouse Emissions October 2012. http://californiaseec.org/resource/us-community-protocol-for-accounting-and-reporting-of-greenhouse-gas-emissions/

4.8 Hazards and Hazardous Materials

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
2. 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?			X	
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
4. 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?			X	

5.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?		x
6.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	x	
7.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?		x

4.8.1 Environmental Setting

This section discusses the environmental setting regarding hazards and hazardous materials in the City of McFarland.

4.8.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the Hazards element and potential impacts of the proposed Plan.

Federal Regulations

Uniform Building Code

The Uniform Building Code (UBC) defines different regions of the United States and ranks them by seismic hazard potential. There are four seismic zones labeled 1-4. Zone 1 indicates the least seismic potential and Zone 4 indicates the highest seismic potential.

The Federal Soil And Water Resources Conservation Act, 1977

The purpose of the Federal Soil and Water Resources Conservation Act (16 United States Code Sections 2001–2009) is to protect or restore the functions of the soil on a permanent sustainable basis.

Uniform Fire Code

The Uniform Fire Code contains regulations for construction and maintenance of buildings and land uses. Topics addressed in the 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.

The Federal Emergency Management Agency (FEMA)

FEMA is the lead agency on building codes and floodplain management, helping equip local and state emergency preparedness and response coordination in the event of a disaster. FEMA administers national flood and crime insurance programs, supports the nation's fire service, and trains emergency response managers.

The Flood Plain Management Act (Cobey-Alquist Act), 1969

The Flood Plain Management Act created the National Flood Insurance Program, which facilitates the identification of flood hazard zones for insurance and floodplain management purposes. In addition, it provides a statement of probability for future flood events. The Act restricts development in Special Flood Hazard Areas, defined by FEMA as having a one percent or greater annual chance of flooding (also called the 100-year flood plain).

The National Flood Insurance Program (NFIP)

The National Flood Insurance Program (NFIP) is administered by FEMA to allow property owners in participating communities to purchase insurance protection from the federal government against losses from flooding. To be eligible for the program, the property owner's land must be in a community with an adopted floodplain management ordinance. The program is intended to reduce future flood risks for new construction in Special Flood Hazard Areas.

The Resource Conservation And Recovery Act (RCRA), 1976

The Resource Conservation and Recovery Act (RCRA) is the principal federal law governing the disposal of solid waste and hazardous waste under the responsibility of the California Department of Toxic Substances Control (DTSC). The DTSC implements and enforces the Hazardous Waste Control Laws for the State of California.

The Federal Aviation Administration

The Federal Aviation Administration is the lead agency for national aviation in the United States. Under the Department of Transportation, it has the authority to regulate and oversee all aspects of American Aviation. There is no airport located within McFarland's city limits.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code 2621), 1971

The Alquist-Priolo Earthquake Fault Zoning Act prevents the construction of buildings on active faults. The Act requires a State geologist to establish earthquake fault zones around active faults and identify these zones in maps.

Seismic Hazards Mapping Act (Public Resources Code 2690), 1990

The Seismic Hazards Mapping Act (SHMA) provides seismic hazard mapping and technical advisory programs to assist cities and counties within California in fulfilling their responsibility to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure and seismic hazards caused by earthquakes.

Unreinforced Masonry Law (Public Resources Code 8875), 1986

The Unreinforced Masonry Law requires jurisdictions located in the highest zone of seismicity, Zone 4, as identified in the Uniform Building Code, to inventory their unreinforced masonry buildings and establish programs to reduce risk related to these buildings.

California Building Code

The California Building Code includes additional amendments to the Uniform Building Code addressing seismic safety in California.

Strategic Fire Plan For California, 2010

This document, produced by the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection, provides an overview of fire risk and state activities to reduce risk. The plan discusses statewide fire safety regulations including road and signage standards, minimum water supply reserves for emergency fire use, and requirements for fuel breaks.

The California Department Of Forestry And Fire Protection (Cal Fire)

The California Department of Forestry and Fire Protection (Cal Fire) is dedicated to the fire protection and stewardship of over 31 million acres of California's privately owned wild land.

Bates Bill (Government Code § 51175), 1992

This statute requires the Cal Fire director to evaluate fire hazard severities in Local Responsibility Areas (LRAs) and make recommendations to local jurisdictions based on High Fire Hazard Severity Zone

locations. LRAs include incorporated cities, cultivated agricultural lands, and some desert lands that receive fire protection from city fire departments, fire protection districts, counties, or by Cal Fire under contract to local governments.

California Fire Code, Title 21, Part 9

The California Fire Code contains regulations regarding many aspects of wildfire and urban fire safety. This code specifies roadway and driveway design, access, building identification, water, and vegetation modification standards as well as defensible space requirements.

California Fire Code, Title 24, Part 9, California Code of Regulations

The California Fire Code is Part 9 of the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. The California Fire Code incorporates the Uniform Fire Code with necessary California amendments. This Code prescribes regulations consistent with nationally recognized practices for the safeguarding, to a reasonable degree, of life and property from the hazards of fire explosion, dangerous conditions arising from the storage, handling, and use of hazardous materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises, and provisions to assist emergency response personnel.

California Health And Safety Code

State fire regulations set forth in Section 13000 et seq. of the California Health and Safety Code include regulations for building standards (as 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.

California Water Code

California law requires local governments to act as the responsible agency for flood control. Section 8401, paragraph (c), of the California Water Code states, “The primary responsibility for planning, adoption, and enforcement of land use regulations to accomplish floodplain management rests with local levels of government” (SWRCB, 2015).

California Uniform Building Code

The state of California Building Code (CBC) contains requirements for structures in flood hazard zones. These requirements are consistent with FEMA requirements for non- residential development in a 100-year floodplain.

The Unified Hazardous Waste And Hazardous Materials Management Regulatory Program, 1993

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program was created in 1993 by California Senate Bill 1082 to consolidate, coordinate, and increase consistency of administrative requirements, permits, inspections, and enforcement activities for environmental and emergency management programs. The program can be implemented at the local government level by Certified Unified Program Agencies.

The California Accidental Release Prevention Program Law (CalARP Program), 1997

The CalARP Program, under the California Safety Code Sections 25531-25543.3, coordinates with federal laws regarding accidental chemical release, allowing for local oversight of state and federal programs.

Hazardous Materials Transport Regulations

The Hazardous Materials Transport Regulations fall under the California Code of Regulations, regulated by the U.S. Department of Transportation (DOT) for all interstate transport of hazardous materials. The DOT establishes safe handling procedures and regulations of hazardous materials. The California Department of Transportation (Caltrans) enforces federal and state regulations and responds to hazardous materials transportation emergencies.

California Division Of Occupational Safety And Health (CAL/OSHA)

The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for

developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials.

California Public Utilities Code; Section 21670

The California Public Utilities Code Section 21670 requires County Boards of Supervisors to establish an Airport Land Use Commission (ALUC) in each county with an operating public airport. The County Board of Supervisors assigns ALUC responsibilities, duties, and powers to an appropriate body of supervisors.

California Public Utilities Code; Section 21675

The California Public Utilities Code Section 21675 requires the Airport Land Use Commission (ALUC) to create a Land Use Plan for the area surrounding its public airports that complies with the Federal Aviation Administration rules and regulations. Section 21675 also provides the necessary components of an Airport Land Use Compatibility Plan (ALUCP).

The California Aviation System Plan (CASP), 2011

The California Aviation System Plan (CASP) was established to ensure that the State has an adequate and efficient system of airports to serve California's aviation needs. The CASP defines the role of each airport in the State's aviation system and establishes funding requirements. Under the CASP, McFarland Airport is classified as a community airport. CASP defines community airports as airports that are "located near small communities or in remote locations; serve, but are not limited to, recreation, flying, training, and local emergencies; accommodate predominately single-engine aircraft under 12,500 pounds; (and) provide basic or limited services for pilots or aircrafts."

Local Regulations

The Regional Water Quality Control Board (RWQCB)

The Regional Water Quality Control Board for the Central Valley Region enforces the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil, groundwater, and surface water bodies.

The Kern County Multi-Hazard Mitigation Plan

The Kern County Multi-Hazard Mitigation Plan (MHMP) provides a risk assessment profile

for flood hazards in Section 4.28, Floods, and Section 4.29, Dam/Levee Failure. The profile includes specific locations of risk, history of events, vulnerability assessments, and

the mitigation capabilities of the County. The MHMP includes a Mitigation Action Plan, which identifies actions, and assigns responsibilities to agencies to reduce damage and

loss to existing and future development in the event of a flooding event. All incorporated cities and incorporated lands in Kern County are party to the MHMP.

The Certified Unified Program Agency (CUPA)

The Certified Unified Program Agency consolidates all the county hazardous materials programs under one agency, the Kern County Environmental Health and Services Department (EHSD). The EHSD is the designated lead agency in CUPA and acts as the

single point of contract for the issuance of permits. The program also provides emergency response to chemical events to furnish substance identification; health and environmental risk assessment; air, soil, water, and waste sample collection; incident mitigation and cleanup feasibility options; and on-scene coordination for state superfund incidents. The program also provides for the oversight, investigation, and remediation of unauthorized releases from underground tanks.

The Kern County Environmental Health and Services Department (EHSD)

The Kern County Environmental Health and Services Department (EHSD) is the local enforcement agency of the California Integrated Waste Management Board under the legal authority of the California Health and Safety Code and the California Code of Regulations. The EHSD is divided into two divisions to protect the public from exposure

to hazardous materials in waste. The Food, Land, and Water Division provides consumer protection through the protection of retail food, land use practices and environmental quality, drinking water safety, and safe and healthy operations of hotels, motels, farm labor camps, and organized recreational camps. The Hazardous and Solid Waste Division protects public health in the areas of hazardous material and waste surveillance and enforcement, radiological health, vector control, solid waste, and infectious waste.

The Kern County Airport Land Use Compatibility Plan (ALUCP)

The Kern County Airport Land Use Compatibility Plan (ALUCP) is the legal document establishing procedures and criteria by which Kern County and the affected incorporated cities can address compatibility issues when making planning decisions regarding airports and the land uses around them. The ALUCP seeks protection of the public as well as aircraft occupants from exposure to aircraft noise, safety to people and property on the ground and occupants in aircrafts, protection of airport airspace, and general concerns related to aircraft over flight.

The Kern Council of Governments Regional Aviation System Plan (RASP)

The Kern Council of Governments Regional Aviation System Plan (RASP) evaluates the county's capacity and ability to meet aviation demand. Fifteen other airports that are considered of importance to meeting the demands of the region's aviation needs are included in the Kern County Council of Governments RASP.

The Kern County Office of Emergency Services (OES)

The Kern County Office of Emergency Services (OES) establishes responsibilities and coordinates preparedness, response, and recovery in the event of an emergency for the Kern County Operational Area (OA), of which McFarland is a part of. This plan is supplementary to the Kern County Emergency Plan.

The City of McFarland Municipal Code

The City of McFarland Municipal Code incorporates the California Fire Code as an adopted reference, with the City's requirements for fire prevention. The Chapter also states that any reference to the Kern County development standards Chapter 17.32 of the Kern County Code shall mean the City of Waco development standards.

4.8.1.2 EXISTING AND BASELINE CONDITIONS

Fire Hazards

Fire hazard assessment for the Safety Element of McFarland includes the following required components: average weather projections for the year, analysis of potential fuel sources, analysis of historical burn data, federal wildland models, and state models of relative fire danger zones.

McFarland's weather patterns maintain relatively dry conditions year-round. The City receives approximately 7 inches of rainfall per year, with the driest months receiving no rainfall on average. Summer temperatures often average above 90 degrees Fahrenheit (°F), with yearly average temperatures fluctuating between 38 and 99 °F. The 30-year average temperature in McFarland peaks at 98.1 °F during July, making it one of the warmest areas in the state. Yearly wind speed in McFarland averages 5.5 miles per hour (MPH) at 10 meters above the ground with averages during the windiest part of the year reaching 6.7 MPH, in late May. Local wind speeds vary significantly based on tree cover and topography, and these wind conditions could spread sparks and firebrands (ignited pieces of wood) a mile or more from the fire event. Infrequently, high wind events occur in the Central Valley with winds above 70 MPH, increasing

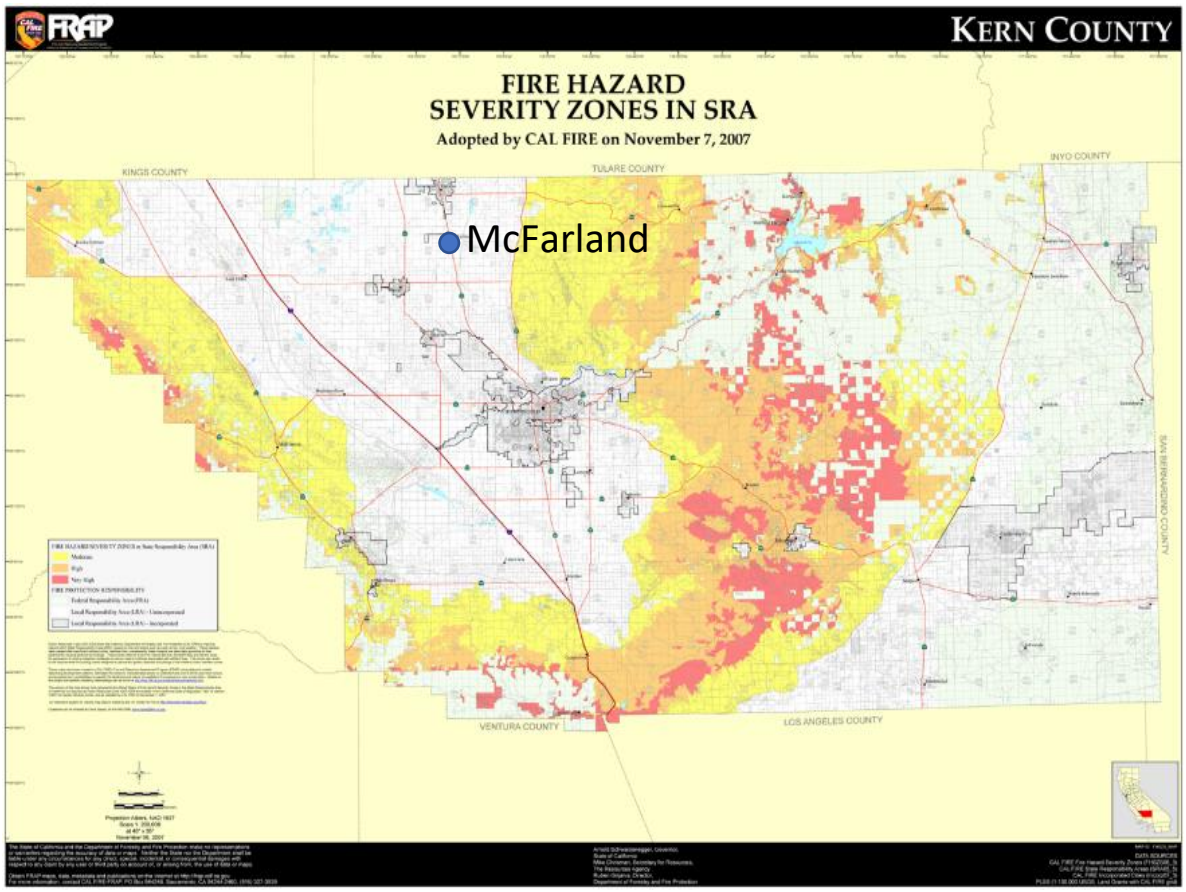
relative fire danger during that event. Required historical fire data collected for the area derives from the following tools and resources:

- InciWeb Incident/Hazard Reporting Map Utility
- USGS GeoMac Historical Fire Data Viewer
- Monitoring Trends in Burn Severity (MTBS) Interagency Viewer

These three databases hold the legally required data and satisfy the requirements for fire hazard readiness.

Map 4.8-1 shows Fire Hazard Severity Zones in State Responsibility Areas in Kern County, utilizing land coverage and weather data from MODIS satellite imaging and remote sensing. This final map does not include potential draft local responsibility areas, but it does represent the most active regional zones for fire hazard potential. No Local, State or Federal Responsibility Areas include McFarland or the projected Sphere of Influence.

MAP 4.8-1: FIRE HAZARD SEVERITY ZONES IN STATE RESPONSIBILITY AREAS



Source: CAL FIRE

CAL FIRE specifically designates High or Very High Fire Hazard Zones based on the fire triangle of fuel, oxygen, and ignition. These zones present a significant danger and constraint to development if present, but none appear in McFarland's City limits or its Sphere of Influence. In Map 4.8-1, red represents Very High Fire Hazard Zones, orange represents High Fire Hazard Zones, and yellow marks Moderate Fire Hazard Zones. Areas in grey, like McFarland, remain unclassified, or at lower risk of fire hazard. While the City does not lie within a CAL FIRE recognized Fire Hazard Severity Zone, urban structure fires remain a concern and steps to prepare for an emergency will benefit all residents.

Basic preparations for evacuation are still an important part of resident safety. Potential ignition sources present in the City today include agricultural equipment, especially during harvest, as well as normal residential and commercial operations.

The City of McFarland sits on land designated as Wildland-Urban Interface by the USGS, or the area where significant vegetation or fuel sources lie near human activity. Two kinds of development cause WUI conditions: interface, the traditional urban-rural divide, or intermix, where development occurs in pockets within an area that has high fire danger. The Sequoia National Forest lies approximately 30 miles to the east of McFarland, and that eastern half of Kern County qualifies as a significant fuel source and an area of significant fire probability, with many areas falling in a High or Very High Fire Hazard Zone.

Twenty-nine catastrophic fire events occurred in California during 2018, including the Camp Fire that devastated large swaths of Butte County. Although large wildfires are unlikely near McFarland, caution is still warranted due to significant potential fuel sources in the area including agricultural waste, liquid fuel, gaseous accelerants, and other significant local point sources of impact in a city of its size. Newer subdivisions are more likely to comply with firesafe building code and material conditions. Industrial, commercial, and residential buildings built before the codes for firesafe construction were enacted possibly pose other concerns in terms of wiring, materials, fuel load, and key evacuation standards including occupancy and initial response time. Kern County Fire maintains records of specific programs and utilities for residents, businesses, and municipalities to engage in resiliency upgrades, home hardening with a 100-foot defensible space buffer, multilingual evacuation information, and other items to assist these situations.

Emergency Preparedness

At the local level, effective mitigation measures against emergency include fire and police incident response times, the ability of the existing infrastructure to support rescue and safety preservation efforts, the fiscal possibility of large-scale response, and the evacuation planning for multi-hazard or large-scale incidents. Large incidents which require greater coordination will usually also trigger disaster response funding and planning, with regional, state, or federal emergency response funds corresponding to the severity and persistence of the incident at hand.

FEMA standards and jurisdictional responsibilities function as a significant part of the existing McFarland Local Hazard Mitigation Plan. Through this plan and evacuation planning with the County Office of

Emergency Services, the City qualifies for required elements of federal grant money disbursement in both mitigation and response roles. In addition, coordination between city, regional, state, and federal agencies might be necessary on all fronts with limited external resources in a true large-scale disaster event. The City's response will require coordination with larger regional agencies in a disaster situation. Multi-Hazard Mitigation and other relevant evacuation plans from Kern County also benefit the City in its preparatory activities. Specifically, Kern County Fire hosts evacuation planning and response documents which include the City, and these documents function as the basic emergency response coordination efforts for McFarland.

Hazardous Materials

According to an EnviroStor search conducted in 2019, there were three DTSC cleanup sites within City limits and one cleanup site within the planned annexation south of McFarland. The three listed cleanup sites within McFarland fall under a School Investigation site type. One cleanup site requires No Further Action, another site's case indicates Inactive – Active Required status, and the third site holds Inactive – Needs Evaluation status. Within the proposed Sphere of Influence expansion, the former location of Famoso Auxiliary Field/Minter Auxiliary Field No. 3, a Military Evaluation site type, functions as a cleanup site. A 2019 search on GeoTracker by the research team showed 3 permitted USTs (Underground Storage Tanks) and eleven LUST (Leaking Underground Storage Tanks) sites in McFarland. Of the eleven sites, only one site cleanup status remains Open.

The Kern County Hazardous Materials Area Plan and Kern County Hazardous Material Business Plan (HMBP) serve to protect residents of Kern County by reporting and responding to hazardous materials emergencies. Hazardous substance incidents have the potential to occur due to SR 99 and the Union Pacific Railway through McFarland. Hazardous materials transported on these networks, potentially released in the events of train derailment or vehicle accidents, could impact areas adjacent to the SR 99/Union Pacific Corridor.

Aircraft Hazards

Four airports fall within the relative vicinity of McFarland, with the most impactful being Delano Airport to the north. The Sphere of Influence of Delano Airport extends south to the border of Elmo Highway, thus providing a constraint to potential development north of that area. Edwards Air Force Base, the nearest military installation, has some potential to impact safety in McFarland. Naval Air Warfare Station China Lake could also potentially affect aircraft hazards. No training or other significant military flightpaths cross over McFarland.

4.8.2 Standards of Significance

4.8.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. 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;
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
4. 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;
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.8.2.2 Methodology

In order to assess impacts associated with hazards and hazardous materials, preferred growth areas and existing land uses identified in the proposed Plan were compared to the locations of hazardous material sites, airports, and fire hazard zones. The City of McFarland Background Report, policies from the proposed Plan, Multi-Jurisdictional Hazard Mitigation Plan, and Fire Hazard Planning documents published by the State were also used for this analysis.

4.8.3 Impact Discussion

HAZ – 1 With mitigation, build-out of the proposed Plan would create a **less-than-significant** hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The transport, use, and disposal of hazardous materials are primarily associated with industry. Buildout of the proposed Plan is to establish a comprehensive industrial sector from just under 20 acres under existing conditions to 1,966 acres of heavy industrial and 1,275 acres of light industrial acreage all of which are to be located along the highway 99 corridor to the south of city limits. Additionally, all subsequent projects of the proposed Plan are to undergo CEQA review and mitigation to ensure less-than-significant impacts with hazardous materials.

All hazardous material production and transportation should comply with state and local regulations and Hazardous Waste Management Plans. The proposed Plan also includes the following policies and programs that address transport and disposal of hazardous materials:

Policy SAF 3.1.2: Coordinate with County departments to monitor the operations of businesses and individuals that handle hazardous materials.

Policy SAF 3.1.4: Enact proper disposal of household hazardous waste.

Program SAF 3.1.4.1: Educate residents on appropriate disposal of household hazardous waste and publicize collection events and locations.

Policy SAF 3.1.6: Safe transport of hazardous materials.

Program SAF 3.1.6.1: Restrict the transport of hazardous materials within McFarland to designated routes.

Program SAF 3.1.6.2: Encourage new pipelines or other channels carrying hazardous materials to avoid residential areas to the greatest extent possible.
Program SAF 3.1.6.3: Support Caltrans and California Highway Patrol efforts to ensure safe transportation of hazardous materials on Highway 99.
Program SAF 3.1.6.4: Encourage developers to investigate development sites to identify hazardous materials.
Program SAF 3.1.6.5: Encourage developers to safely transport and dispose of hazardous materials.

Program SAF 3.1.7.3: Evaluate imported soils to ensure that they are free of contamination by hazard materials.

Applicable Regulations:

The Unified Hazardous Waste And Hazardous Materials Management Regulatory Program, 1993

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

HAZ – 2 BUILD-OUT OF THE PROPOSED PLAN WILL CREATE A LESS-THAN-SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT THROUGH REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT.

Proposed industrial and commercial land uses in the Plan have the potential to create a significant hazard in upset or accident conditions if they involve the use, production, or transport of hazardous materials; however, all subsequent projects of the proposed Plan will require CEQA review and mitigation of impacts associated with hazardous materials. Furthermore, in the case that the release of hazardous materials occurs, the City should collaborate with the County, following protocol from the County's Hazardous Materials Area Plan to carry out a study to evaluate the nature and extent of the contamination, and the potential threat to public health and/or the environment. The proposed Plan also includes the following policies and programs that address hazardous materials:

Policy SAF 3.1.2: Coordinate with County departments to monitor the operations of businesses and individuals that handle hazardous materials.

Program SAF 3.1.2.1: Mitigate the potential for harmful effects of hazardous materials through the permitting process.

Program SAF 3.1.2.2: When approving new development, encourage the preparation of a report certifying that the site has been surveyed for hazardous contaminants and has been appropriately remediated for the future proposed use.

Policy SAF 3.1.3: Reduce dependency on hazardous materials and products.

Policy SAF 3.1.7: Control pollution from hazardous materials.

Program SAF 3.1.7.1: Institute permitting system for demolition activities.

Program SAF 3.1.7.2: Establish a site inspection process to oversee safe demolition of existing structures.

Policy SAF 4.1.1: Prepare emergency centers and critical infrastructure for hazards.

Program SAF 4.1.1.4: Coordinate with county, state, and federal agencies on emergency preparedness.

Applicable Regulations:

The Unified Hazardous Waste And Hazardous Materials Management Regulatory Program, 1993

Significance Before Mitigation: Less than significant

HAZ – 3 BUILD-OUT OF THE PROPOSED PLAN HAS A LESS-THAN-SIGNIFICANT 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.

Most existing and proposed schools (shown in light blue on Map 4.8-2) are located beyond the quarter-mile threshold from proposed industrial and commercial land uses. However, being a relatively small community which a major state highway bisects, there is ever so slight the potential for exposure especially for one school within the distance threshold.

Applicable Regulations:

The Unified Hazardous Waste And Hazardous Materials Management Regulatory Program, 1993

Significance Before Mitigation: No impact

HAZ – 4 BUILD-OUT OF THE PROPOSED PLAN WILL CREATE A LESS-THAN-SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT AS A RESULT OF LOCATING DEVELOPMENT ON A SITE WHICH INCLUDED ON A LIST OF HAZARDOUS MATERIALS SITES COMPILED PURSUANT TO GOVERNMENT CODE SECTION 65962.5.

According to an EnviroStor search conducted in 2019, there were three DTSC cleanup sites within City limits and one cleanup site within the planned annexation south of McFarland. The proposed Plan will not change the existing land uses on the contamination sites without mitigation. Additionally, there is a potential for aerially deposited lead (ADL) soil contamination along highway 99. Projects associated with development along highway 99 should include soil sampling to test for ADL. All subsequent projects of the proposed Plan will require CEQA review and mitigation of impacts associated with hazardous materials. The proposed Plan also includes the following policies and programs addressing hazardous materials sites:

Policy SAF 3.1.1: Map and remediate contaminated sites.

Program SAF 3.1.1.1: Locate unidentified contamination sites and remediate with property owners and applicable agencies.

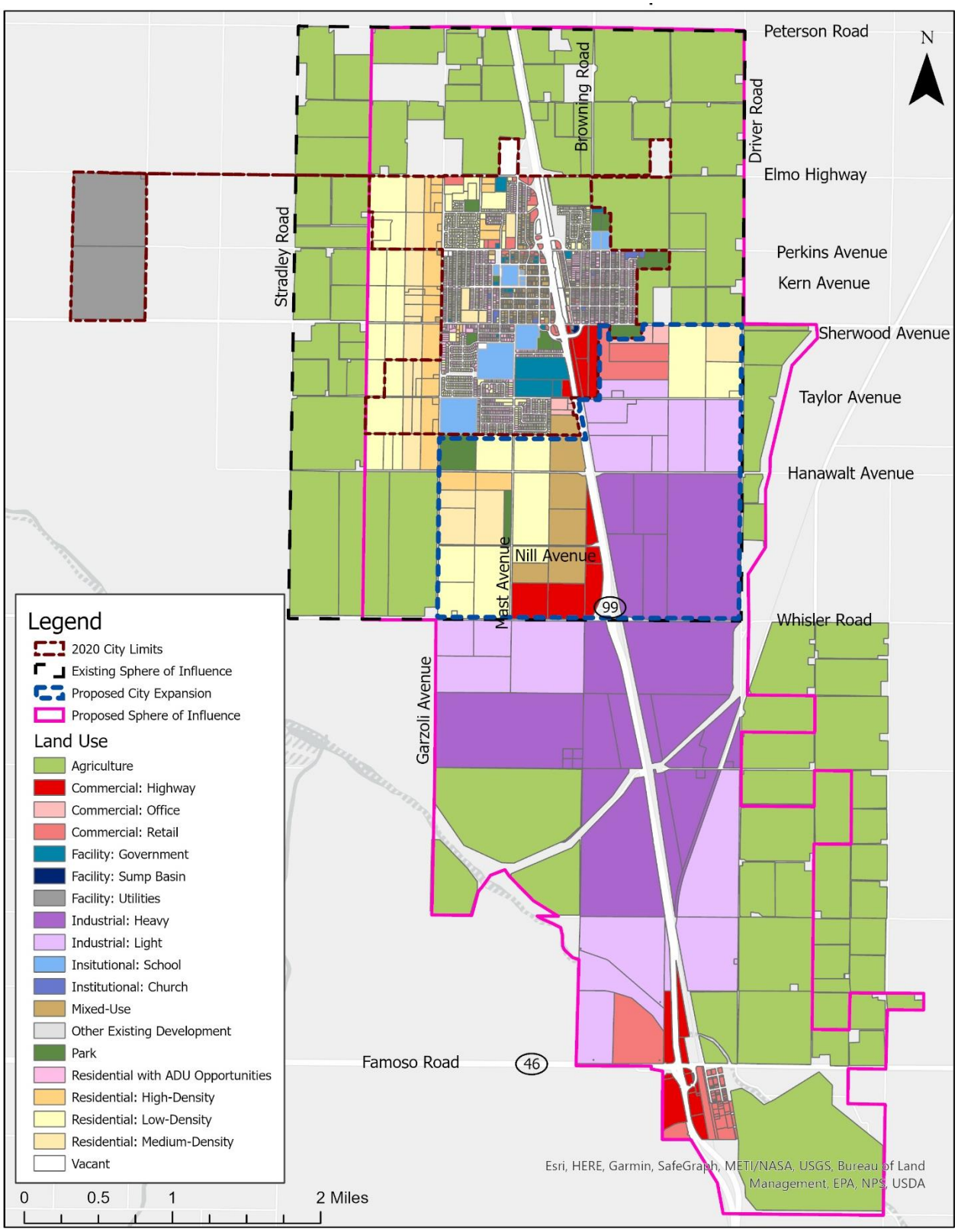
Program SAF 3.1.1.2: Work with Federal, State, regional, and local agencies to identify contaminated sites and work with property owners and applicable agencies to remediate them. When working with agencies, use the Hazardous Waste and Substances Sites List (Cortese List) and Environmental Restoration Program EnviroStor database.

Applicable Regulations:

The Unified Hazardous Waste And Hazardous Materials Management Regulatory Program, 1993

Significance Before Mitigation: Less than significant.

MAP 4.8-2: CONCEPTUAL GROWTH LAND USE MAP



HAZ – 5 BUILD-OUT OF THE PROPOSED PLAN WILL RESULT IN A **NO IMPACT** IN TERMS OF SAFETY HAZARD OR EXCESSIVE NOISE FOR PEOPLE RESIDING OR WORKING IN THE PROJECT AREA 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

While four airports fall within the relative vicinity of McFarland, only three are relatively impactful. Delano Airport's Sphere of Influence extends south to the border of Elmo Highway, thus providing a constraint to potential development north of that area. The proposed Plan will not extend into the Sphere of Influence of Delano Airport. There is no private airstrip within the Planning Area. While no training or other significant military flightpaths cross over McFarland, Edwards Air Force Base, the nearest military installation, has some potential to impact safety in McFarland. Naval Air Warfare Station China Lake could also potentially effect aircraft hazards. Nevertheless, the proposed Plan includes the following policies and programs to address safety hazards from public or public use airports.

Policy SAF 3.2.1: Reduce exposure to aircraft hazards through the permitting process.

Program SAF 3.2.1.1: Monitor development within the Airport Zone to ensure compliance with restrictions designed to increase flight safety, such as reflective or volatile materials, in connection with the Federal Aviation Administration.

Program SAF 3.2.1.2: As future military development or training program areas arise, enact reasonable land use controls to promote military readiness and increase civilian safety.

Applicable Regulations: The Naval and Air Force Uniform Code

Significance Before Mitigation: No impact

HAZ – 6 BUILD-OUT OF THE PROPOSED PLAN WOULD POSE A **LESS-THAN-SIGNIFICANT IMPACT** IN IMPAIRING OR EXACERBATING IMPLEMENTATION OF, OR PHYSICALLY INTERFERE WITH AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN.

The proposed Plan includes policies, which ensure collaboration with Kern County on the development and implementation of a Disaster and Emergency Preparedness Plan (ERP) as well as support efforts outlined in the existing McFarland Local Hazard Mitigation Plan. Proposed land uses do not interfere with existing ERPs but would require their update to support growth.

Policy SAF 4.2.1: Coordinate emergency preparedness and response measures with Kern County's Emergency Operations Plan.

Program SAF 4.2.1.1: Plan emergency event evacuation in coordination with county, state, and federal agencies.

Program SAF 4.2.1.2: Establish procedures for safe, prompt, and orderly evacuation, locations of safe meeting areas, emergency supplies including food, water, and medical supplies, and general emergency protocols.

Program SAF 4.2.1.3: Conduct periodic trainings for staff on emergency operations procedures and response.

Program SAF 4.2.1.4: Craft and publicize emergency procedures and define responsibilities for government and non-government entities during a crisis.

Applicable Regulations:

Assembly Bill 747 (AB 747)

Seismic Hazards Mapping Act of 1990

Titles 19 and 24, vol. 9 of the California Building Code (California Fire Code and California Building Code)

Significance Before Mitigation: Less than significant

HAZ – 7 THE PROPOSED PLAN WILL EXPOSE PEOPLE OR STRUCTURES, EITHER DIRECTLY OR INDIRECTLY TO A LESS-THAN-SIGNIFICANT RISK OF LOSS, INJURY, OR DEATH INVOLVING WILDLAND FIRES.

No Local, State or Federal Responsibility Areas include McFarland or the projected Sphere of Influence within the Fire Hazard Severity Zones. While the City does not lie within a CAL FIRE recognized Fire Hazard Severity Zone, urban structure fires remain a concern and steps to prepare for an emergency will benefit all residents.

Additionally, the City of McFarland sits on land designated as Wildland-Urban Interface by the USGS, or the area where significant vegetation or fuel sources lie near human activity. The Sequoia National Forest lies approximately 30 miles to the east of McFarland, and that eastern half of Kern County qualifies as a significant fuel source and an area of significant fire probability, with many areas falling in a High or Very High Fire Hazard Zone. Although large wildfires are unlikely near McFarland, caution is still warranted due to significant potential fuel sources in the area including agricultural waste, liquid fuel, gaseous accelerants, and other significant local point sources of impact in a city of its size.

The following policies and programs from the proposed Plan are to ensure that people or structures are exposed to a less-than-significant risk of loss, injury, or death.

Policy SAF 2.3.1: Evaluate and respond to urban and wildland fire hazards affecting McFarland where present.

Program SAF 2.3.1.2: Update urban and wildland fire threat as data sources become available and seek guidance and data from Cal Fire.

Policy SAF 2.3.3: Evaluate fire threats in existing and proposed developments.

Program SAF 2.3.3.1: Coordinate fire threat evaluation with Kern County Fire, given Cal Fire threat assessments and federal data sources.

Program SAF 2.3.3.2: Enact measures for resident and employee safety in areas of recognized commercial and industrial fire threat.

Program SAF 2.3.3.3: Reduce vulnerability especially with vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.) to prevent drought/extreme weather-related fire risk.

Program SAF 2.3.3.4: Encourage commercial and industrial properties to maintain fire safe standards and operate in a safe manner when handling flammable materials or byproducts.

Policy SAF 2.3.4: Create defensible space for McFarland through best management practices.

Program SAF 2.3.4.1: Encourage abatement of potentially flammable material through trimming, thinning, or reduction of potential fuel from habitable or occupied areas according to Cal Fire defensible space standards.

Program SAF 2.3.4.2: Check with state and federal hazard management agencies for updated areas of concern in wildland and urban fire scenarios on a 10-year cycle.

Policy SAF 2.3.5: Adopt uniform building and fire codes as they are updated by the State.

Policy SAF 2.3.6: Educate the public about fire safety.

Program SAF 2.3.6.1: Promote public fire safety education programs to reduce accidents, injuries, and fires in coordination with McFarland School District and community agencies.

Program SAF 2.3.6.2: Promote public safety through Cal Fire programs, pamphlets, and education opportunities with school and community engagement in English and Spanish.

Applicable Regulations:

Assembly Bill 747 (AB 747)

Seismic Hazards Mapping Act of 1990

Titles 19 and 24, vol. 9 of the California Building Code (California Fire Code and California Building Code)

Significance Before Mitigation: Less than significant

4.8.4 Summary of Potential Impacts and Mitigation Measures

The following mitigation measures are intended to mitigate potentially significant impacts regarding hazards and hazardous materials.

HAZ – 1 Build-out of the proposed Plan would create a potentially significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The transport, use, and disposal of hazardous materials are primarily associated with industry. Buildout of the proposed Plan is to establish a comprehensive industrial sector from just under 20 acres under existing conditions to 1,966 acres of heavy industrial and 1,275 acres of light industrial acreage all of which are to be located along the highway 99 corridor to the south of city limits. All hazardous material production and transportation should comply with state and local regulations and Hazardous Waste Management Plans. Additionally, all subsequent projects of the proposed Plan are to undergo CEQA review and mitigation to ensure less-than-significant impacts with hazardous materials.

MITIGATION HAZ - 1

All hazardous material production and transportation should comply with state and local regulations and Hazardous Waste Management Plans.

Significance After Mitigation: Less than significant.

4.8.5 References

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California Department of Forestry. Kern County Fire Hazard Severity Zones in State Responsibility Areas, 2008; 2019. Fire Hazard Severity Zones Maps. Retrieved from https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

Federal Emergency Management Agency. US Government. (n.d.). Retrieved from https://www.fema.gov/disasters/.

Geospatial Multi-Agency Coordination Utility Fire Application. and Historical Burn Data 2002-2018. (n.d.). Retrieved from https://www.geomac.gov/.

InciWeb developed and maintained by USDA Forest Service, F., and A. M. (n.d.). InciWeb the Incident Information System. Retrieved from https://inciweb.nwcg.gov/.

Kern County Area Mass Care and Shelter Guidance. Emergency Plans. Kern County Fire Department Emergency Response Services.

4.9 Hydrology and Water Quality

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			x	
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		X		
3. 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?			x	
4. 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			x	

5.	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 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?		**X**
6.	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 impede or redirect flood flows?		**X**
7.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?		**X**
8.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	X	

4.9.1 Environmental Setting

This section discusses the environmental setting regarding hydrology and water quality in the City of McFarland.

4.9.1.1 REGULATORY FRAMEWORK

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the hydrology element and potential impacts of the proposed Plan.

Federal Regulations

Environment Protection Agency

Clean Water Act, 1972 The Clean Water Act (CWA) was established to protect the quality of U.S. surface waters. It created a program for regulating pollutants into United States surface waters, including creating standards for water quality for all types of pollutants. It is unlawful to discharge any pollutant from a point source (stationary) into navigable waters in the U.S. without a permit.

Section 401 Clean Water Act

Gives the State Water Board the authority to review proposed federally permitted activity that may impact water quality and to certify, condition, or deny the activity if it does not comply with state water quality standards.

National Pollutant Discharge Elimination System (NPDES)

NPDES is a permit program created by the CWA that grants the Environmental Protection Agency authority to permit, administrate, and enforce the regulations of the program. NPDES permit program regulates point sources that discharge pollutants into the waters of the United States. The permit contains limits on discharge amount, monitoring and reporting requirements, and other provisions to ensure the discharge will not hurt water quality or citizen health. NPDES Storm Water Program NPDES regulates some storm water discharge from three types of sources: municipal separate storm sewer systems (MS4), construction, and industrial. MS4 systems are not part of a sewage treatment plant and, therefore, might be required to obtain a permit to prevent untreated water from entering a local water body. The permits require a municipality or storm water discharger to create a Storm Water Management Plan. The construction permit is required for construction sites disturbing one or more acres and includes provisions to limit erosion and sediment discharge and for site stabilization. The industrial permit is federally required for 11 categories of industrial activity.

Safe Drinking Water Act, 1974

The Safe Drinking Water Act (SDWA) is administered by the EPA to protect U.S. drinking water and its sources (lakes, rivers, springs, etc.). The EPA sets national health-cased standards for drinking water to protect against natural and man-made contaminants that may be present in drinking water. The SWDA is administered in California by the CA State Water Resources Control Board.

National Flood Insurance Act, 1968

The National Flood Insurance Act was adopted to reduce the losses from floods and mudslides due to increasing development in areas in flood and mudslide hazards. The act created a standard level of protection for properties within flood areas that flood an average of once every 100 years.

National Flood Insurance Program

This program aims to mitigate future flood losses nationwide through providing affordable, federally backed insurance to property owners, which requires communities to create a floodplain management systems or ordinances with effective enforcement provisions to reduce future flood losses.

Executive Order 11988, 1977

Requires executive departments and agencies (agencies) to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative" (EO 119880).

State Regulations

Porter-Cologne Water Quality Control Act, 2016

This act was established to protect water quality and the beneficial uses of water, as applied to surface water, wetlands, and ground water. This act monitors both point and nonpoint sources of pollution. This act established 9 Regional Water Boards and the State Water Board to implement its provisions and protect state water quality. The act requires the adoption of water quality control plans for the SWRCB and RWQCBs, which include establishing water quality objectives as well as establishing implementation, surveillance, and monitoring plans. The City of McFarland is located in the Central Coast RWQCB

Cobey-Alquist Flood Plain Management Act

Established to encourage local governments to plan land use regulations to accomplish flood plain management and to provide state assistance and guidance (California Water Code Section 8401). Construction of structures in designated floodways which may endanger life or restrict the carrying capacity of the floodway shall be prohibited under this act (California Water Code Section 8410).

Groundwater Management Act (Assembly Bill 3030), 1992

Provided a systematic procedure for an existing local agency to develop a groundwater management plan, including a list of 12 technical components that are encouraged to be included in the plan.

Sustainable Groundwater Management Act (SGMA), 2014

Initially composed of three bills (AB 1939, SB 1319, and SB 1168) and is continuously updated from new legislation, the Act is a continuation of the Groundwater Management Act and provides tools for the sustainable management of groundwater basins. The SGMA requires local agencies to establish a

Groundwater Sustainability Agency prior to developing a groundwater sustainability plan for the basin or sub-basin it is located. SGMA also labels groundwater basins based on priority. The City of McFarland is located in the Central Coast Hydrologic Region. The City of McFarland does not have a groundwater sustainability plan.

Groundwater Elevation Monitoring Program Act, 2009

This Act (Senate Bill X 7-6) provides state water grants and loans for agencies that monitor groundwater elevations in their basins that supply water to the area. The purpose of the grants is to monitor groundwater levels and season changes in California.

Senate Bill 610 And 221

The purpose of these bills is to assist water suppliers, cities, and counties with integrating water and land use planning to provide Californian cities, farms, and rural communities an adequate water supply. These bills increase requirements and incentives for agencies to adopt water management plans. Under SB 610, a large project will not have to analyze their water demand if their use was included in a previously developed management plan. SB 210 requires analysis of subdivisions of a certain size to determine if adequate water supply will be available (California Department of Water Resources, 2003).

Urban Water Conservation Act, 2009

Requires all water suppliers to increase their water use efficiency. The Act set an overall goal of reducing per capita water use by 20% by December 31, 2020. An urban water supplier shall include baseline per capita water use, set water use targets, interim water use targets, and compliance daily per capita use by July 2011.

Assembly Bill 2572 (Water Metering Legislation), 2004

AB 2572 requires urban water suppliers to install water meters on all municipal and industrial water service connections by January 2025. The bill finds that water metering and volumetric pricing are one of the most effective conservation tools and, therefore, requires urban water suppliers to charge customers who have meters based on the volume of water deliveries by 2010 (California Water Code, 2004).

California Green Building Standard Codes

Model Water Efficient Landscape Ordinance (AB 1881 and EO B-29-15), 2015: The purpose of the model ordinance is to promote efficient landscaping practices that conserve water. The ordinance applies to new construction projects with a landscape greater than 500 sq. ft. that require a plan check, and some other listed projects. Local agencies are required to report their water efficient requirements. The model ordinance also includes various standards for plant types, irrigation designs, landscape maintenance, and efficient water system types (California Department of Water Resources, 2015)

SWRCB Construction General Permit

Requires all construction activities that disturb one or more acres of land to comply with SWRCB Construction General Permits.

Local/Regional Regulations

Central Valley Regional Water Quality Control Board (CVRWQCB)

The CVRWQCB monitors hydrological areas and provides regulatory oversight. The CVRWQCB also handles the issuance of waste discharge requirements, enforcement action against violators, and monitoring of water quality through the development of "basin plans".

The Water Quality Control Plan for the Tulare Lake Basin

The Water Quality Control Plan for the Tulare Lake Basin identifies the beneficial uses of the Tulare Lake basin (CVRWQCB, 2004).

Kern County California Local Agency Formation Commission

The California Local Agency Formation Commission (LAFCO) conducts municipal service review for specified public agencies under their jurisdictions. This includes evaluating an agency's ability to provide public services within the designated service area. The Kern County LAFCO governs the City of McFarland.

The Kern County Multi-Hazard Mitigation Plan (MHMP)

The Kern County MHMP provides a risk assessment profile for flood hazards in Section 4.28, Floods, and Section 4.29, Dam/Levee Failure. The profile includes specific locations of risk, history of events, vulnerability assessments, and the mitigation capabilities of the County. The MHMP includes a Mitigation Action Plan, which identifies actions, and assigns responsibilities to agencies to reduce damage and loss to existing and future development in the event of a flooding event (Kern County, 2005).

Kern County Integrated Regional Water Management Plan (IRWMP)

The Kern County IRWMP addresses how limited water resources in the Kern Region, including both incorporated and unincorporated areas, will be allocated, conserved, recharged, and recycled (Kern County Water Agency, 2011).

4.9.1.2 Existing and Baseline Conditions

Water and Hydraulic Forces

Water is a valuable commodity that has the potential to supply resources, as well as cause damage. McFarland's topography is primarily flat and receives relatively little precipitation. However, periods of intense rainfall combined with its flat topography can cause water to pool up in certain locations causing flooding damage. McFarland can receive the benefits and be resilient to potential hazards by understanding and predicting the effects of hydraulic forces. If these forces are not addressed, there is potential for significant damage to health and property.

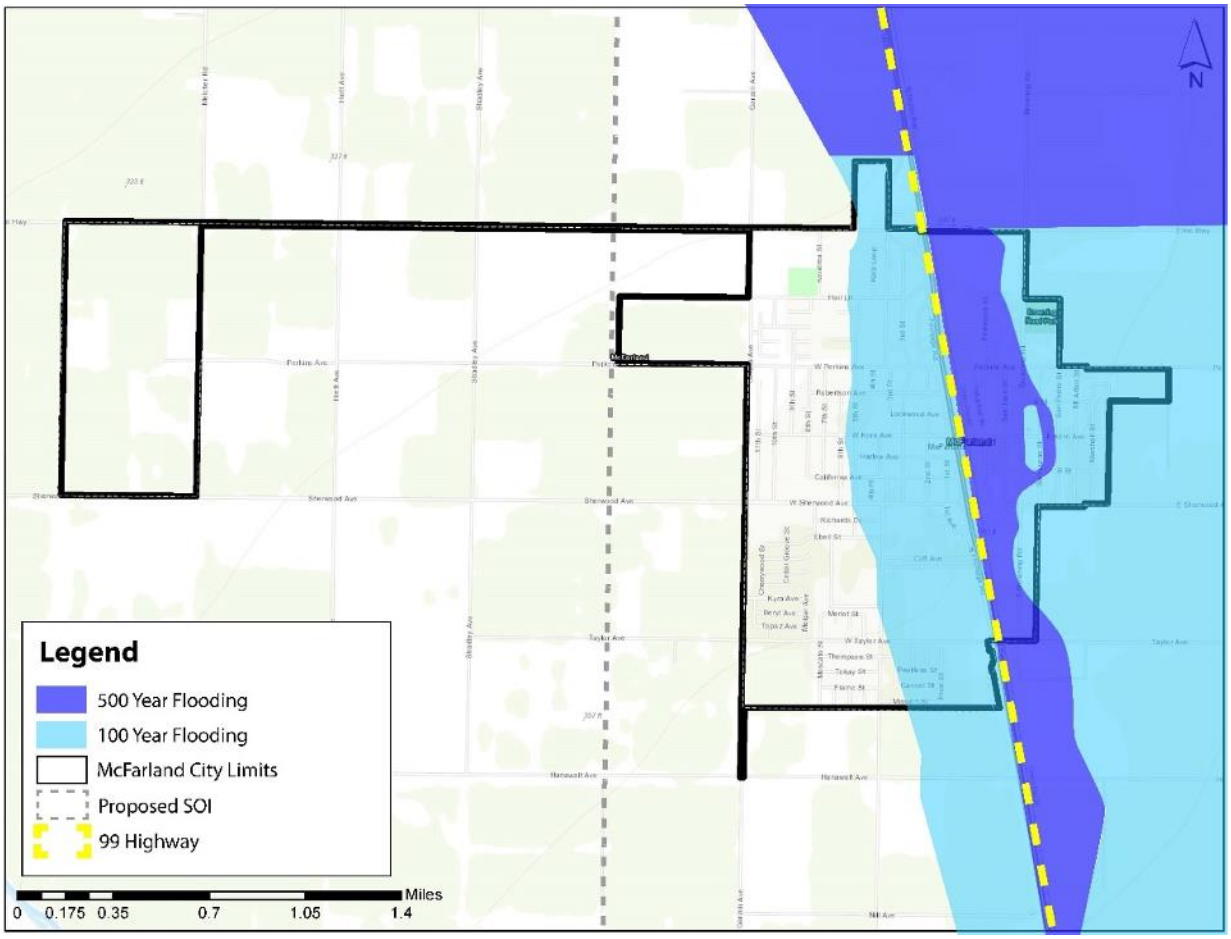
Flooding

Flooding events occur when the water absorption capacity of the soil is exceeded and water pools above the surface. The inability of existing infrastructure to mitigate these flooding events can exacerbate the issue and escalate the damage potential. According to the McFarland 2015 Storm Drain Master Plan, there are three main existing weaknesses to McFarland's flooding infrastructure:

- Undersized sump basins
- Undersized storm drainage systems
- Absence of storm drainage systems in areas where there are large volumes of storm runoff

Map 4.9-1 shows areas in McFarland that are most vulnerable to flooding hazard, according to the Federal Emergency Management Agency (FEMA).

MAP 4.9-1: FLOOD SEVERITY IN MCFARLAND



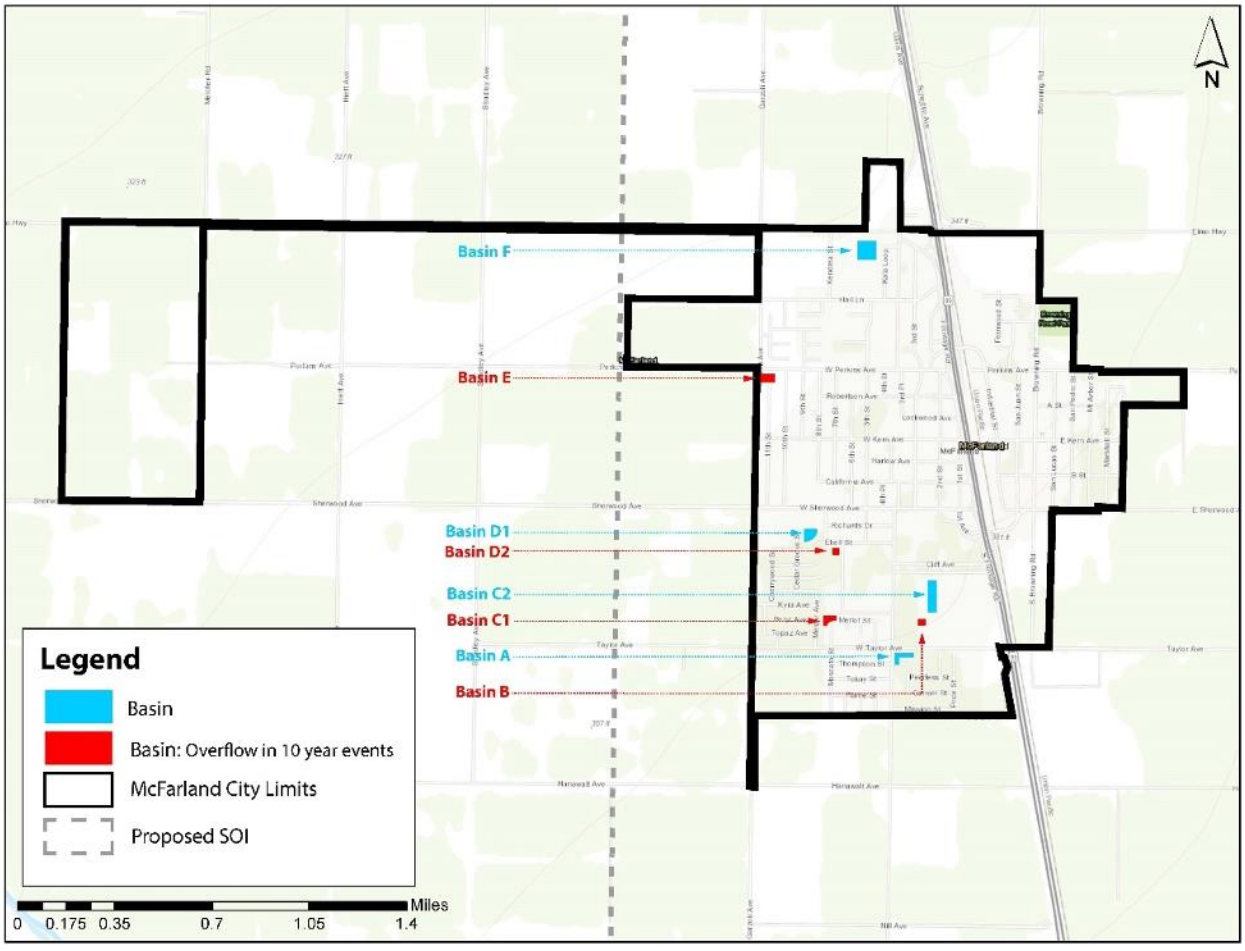
The levels of flood severity are divided by Highway 99 running through McFarland. East of Highway 99, residential areas are vulnerable to 500-year flooding events as well as 100-year flooding events. West of Highway 99, there is potential for 100-year flooding events to occur up to 5th Street within McFarland's

City limits. To mitigate the flooding hazards on the east side of Highway 99, there are multiple strategies that the City can pursue:

- Increase the size of sump basins
- Increase the amount of sump basins
- Update existing storm drainage systems
- Add additional storm drainage systems

Map 4.9-2 shows undersized sump basins in McFarland. These locations have a higher priority for expansion over the other surrounding basins in the area. Maximizing the sump basins can be accomplished by expanding the diameter of the basin or by increasing its depth.

Map 4.9-2: Basin Overflow Sites



In 2016, the City adopted a Local Hazard Mitigation Plan which prioritized projects that mitigated flooding; the City hopes to accomplish some of these projects on the east side of McFarland. The plan identified two sources of regional and local flooding in the City. Major flood problems on the eastern side of the City result from the overflow of Poso Creek and runoff from the mountains east of McFarland. The runoff from

the mountains moves along the Friant-Kern Canal south to State Route 99 (SR 99). The runoff then combines with overflows from Poso Creek and moves north, across the canal siphon and into the City.

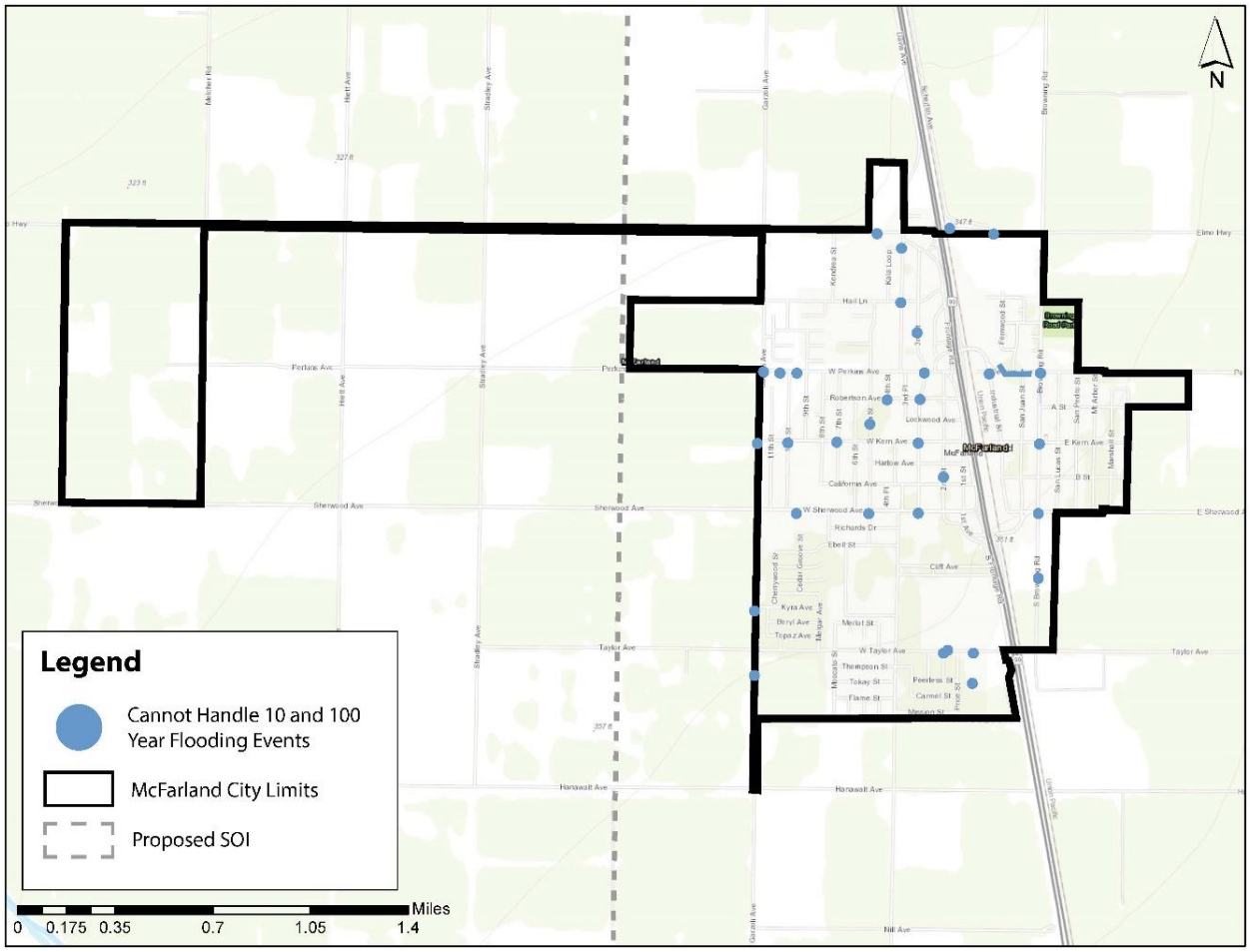
Assessing parcel data from 2012, approximately 457 parcels exist within the 100-year floodplain and 1,081 parcels exist within the 500-year floodplain. These properties account for 55% of homes in McFarland. Using population data from 2012, approximately 2,377 people live within the 100-year floodplain and 5,539 live within the 500-year floodplain. Many critical facilities are also located within the 500-year floodplain; these include two elementary schools (Browning Road Steam Academy and Kern Avenue Elementary), the McFarland Veterans Community Center, the grocery store, City Hall, and the police station.

Street Flooding

According to the McFarland 2015 Storm Drain Master Plan, many of the existing storm drainage systems are not prepared to handle 10 and 100-year flooding events. Based on this data and FEMA flood area data, the most vulnerable locations in McFarland are located on East Perkins Avenue. Map 4.9-3 identifies the locations.

Lake Woollomes, located approximately 3.5 miles northeast of McFarland, can cause flooding issues within the City when overflowing occurs during storms. The additional flooding stress from the north end of McFarland makes East Perkins Avenue an ideal priority site to improve flood control within the City. In addition, renovations should be prioritized on the northeast side of McFarland.

MAP 4.9-3: STREET OVERFLOW SITES



Potable Water

McFarland's peak source capacity is 7,300 gallons per minute with an approximate annual consumption of 1,825-acre feet. The maximum daily water use is estimated as 11,028 cubic feet per second and peak demand is estimated at 7.43 million gallons per day. There are four wells within the City of McFarland. The City of McFarland collects fees to pay for quality testing and infrastructure improvements, and the water is used for both residential and commercial water uses, as well as for firefighting uses. The wells depths have lowered over time resulting in a slight decline in water quality. There are present concerns about the water quality of these wells. A quality test from 2016 showed positive for arsenic and coliform. A consumer confidence report conducted in 2018 reported two violations in water quality, one for 1,2,3 Trichloropropane, and the other for a total coliform rule reporting violation. Water levels and quality are important to monitor to maintain safe water sources for the community. Maintaining an adequate water supply is also important as related to population growth and the planned future expansions of the City.

Sanitary Sewer

The wastewater treatment plant for the City on Elmo Highway has a capacity of 1.55 million gallons per day and is processing an average monthly flow of 1.1 million gallons per day. There is also a planned expansion of the existing facility, to increase the daily capacity to 2.5 million gallons per day.

While the overall conditions of the City's sewer piping are generally sound, on the eastern side of town there is only an 8-inch pipe connecting the homes and businesses to the wastewater treatment plant. The City has been unable to expand the pipe capacity as it passes underneath Highway 99. There is a planned expansion of the wastewater treatment plant, but due to the pipe size limitation it would only increase capacity for the west side. Addressing the capacity issues on the eastern side of McFarland is of paramount concern for any residential, commercial, or industrial expansion within the City.

Stormwater

The City is using sump basins as their form of flood and storm control in the area, with existing and proposed locations shown in Map 16-1. There are nine existing lots that are owned by the City and serve as basins to hold and retain water until it can percolate into the ground. The City does not have street-level stormwater infrastructure, such as storm drains. Community members identified that this was a serious issue, particularly in the east side of town. One community member mentioned at the first community meeting that students at Browning Road Elementary School are often unable to cross the large puddles and require assistance from school staff. The existing Local Hazard Mitigation Plan from 2016 identified the need for a Poso Creek study and mentioned the risk that it can pose to residents. The Storm Drain Master Plan of 2015 identified three possible sump basin locations, one is within City limits and the other two directly to the south.

4.9.2 Standards of Significance

4.9.2.1 CEQA Thresholds

Based on the significance criteria listed in Appendix G of the CEQA Guidelines, the construction and operation of the project is considered to have a significant impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
3. 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;
4. 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
5. 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 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;
6. 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 impede or redirect flood flows;
7. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
8. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.9.2.2 METHODOLOGY

To determine potential impacts the Plan on hydrology and water quality, the following methods were used:

1. Analyze existing inhabited areas and preferred growth areas in the City of McFarland 2040 General Plan for potential conflicts with existing policies and programs listed in 4.9.2.1.
2. Identify proposed policies and programs in the Plan that would potentially minimize or mitigate any identified conflicts resulting from the implementation of the Plan.

4.9.3 IMPACT DISCUSSION

HY – 1 THE PROPOSED PLAN WOULD RESULT IN **LESS-THAN-SIGNIFICANT** IMPACTS REGARDING VIOLATING ANY WATER QUALITY STANDARDS OF WASTE DISCHARGE REQUIREMENTS OR OTHERWISE SUBSTANTIALLY DEGRADE SURFACE OR GROUND WATER QUALITY.

Future development associated with the buildout of the proposed Plan could negatively affect the quality of surface waters. Construction activities, which include grading, excavation, and other earthmoving activities, could expose soils, which can be eroded and deposited into nearby water sources. Increased

sedimentation and turbidity from storm water runoff could lead to lower oxygen levels and increased algal growth, which could harm aquatic life. Post-construction impacts to water quality and waste discharge are due to an increase of impervious surfaces creating changes to storm water amount and quality. An increase of impervious surfaces also could lead to an increase of pollutants that enter storm water runoff. Urban runoff can potentially carry oil and grease, metals, sediment, pesticide and chemical residues from roadways, parking lots, and rooftops, depositing them into nearby waterways. Development from the proposed Plan is required to comply with State and local water quality regulations that are designed to protect water quality during construction.

Complying with the standards and regulations will prevent the proposed Plan to violate any water quality standards related to waste discharge. Individual projects are also required to undergo CEQA analysis and mitigations. Policies and programs in the Plan also aim to reduce the impacts of future development on water quality.

Policy PF 1.1.1: Protect water quality.

Program PF 1.1.1.1: Continue monitoring water quality and publish results as available.

Program PF 1.1.1.2: Continue to monitor the condition of pipes and general infrastructure for water distribution

Policy SAF 2.4.1: Conserve water in all sectors.

Policy SAF 2.4.3: Identify groundwater recharge locations where soil and geography allow for infiltration.

Program SAF 2.4.3.1: Pursue grants to aid long term groundwater recharge projects.

Program SAF 2.4.3.2: Examine proposed public infrastructure projects for potential water recharge opportunities.

Policy SAF 3.1.1: Map and remediate contaminated sites.

Applicable Regulations:

The Porter-Cologne Water Quality Control Act

Safe Drinking Water Act (SDWA)

State Water Resources Control Board

Central Valley Regional Water Quality Control Board (CVRWQCB)

Kern County Integrated Regional Water Management Plan (IRWMP)

Significance Before Mitigation: Less than significant

HY – 2 FOLLOWING MITIGATION, THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT IMPACTS REGARDING SUBSTANTIALLY DECREASING GROUNDWATER SUPPLIES OR INTERFERING SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN.

The future development proposed by the Plan would result in an increase in impervious surfaces which may interfere with the groundwater recharge. However, regulations for stormwater require various measures that aim to improve on-site retention and drainage improvements.

The future growth of the Plan also increases the demand for water usage through increase in population and development. As mentioned in existing conditions, McFarland depends on groundwater from wells to provide water for residential uses, commercial uses, and firefighting. However, the Plan focuses on water conservation and strategies to reduce water use and to mitigate the increased demand for water. Given the City's dependence on ground water supply, the Plan includes many policies and programs to protect the water supply.

Objective CON 2.1: Conserve water usage for all sectors.

Policy CON 2.1.2: Decrease water use in new and existing developments.

Program CON 2.1.2.1: Investigate the use of gray water irrigation systems in new developments.

Program CON 2.1.2.2: Use drip irrigation systems and drought tolerant or native vegetation in newly developed areas.

Program CON 2.1.2.3: Develop a plan to decrease water use in public landscapes by 25% of 2018 levels by 2035. Convert existing landscapes to drip systems and replace landscapes requiring significant irrigation with drought tolerant vegetation.

Program CON 2.1.2.4: Apply for funding from The Institutional Turf Replacement Program (ITRP) to help offset the costs of conversion.

Program CON 2.1.2.5: Measure the success of current water conservation programs and utilize data in future programs and ordinances.

Policy SAF 2.4.1: Conserve water in all sectors.

Program SAF 2.4.1.1: Educate the community on water conservation practices.

Program SAF 2.4.1.2: Measure the success of current water conservation programs, prioritizing development of successful programs, and continually revise programs to meet water reduction goals.

Program SAF 2.4.1.3: Create new programs to promote efficient and responsible water use.

Program SAF 2.4.1.4: Enact new measures as needed according to protocols established by the Kern Water Authority.

Policy SAF 2.4.2: Invest in waterwise infrastructure.

Program SAF 2.4.2.1: Adapt existing green spaces in public areas to retain rainwater on site.

Policy SAF 2.4.3: Identify groundwater recharge locations where soil and geography allow for infiltration.

Program SAF 2.4.3.1: Pursue grants to aid long term groundwater recharge projects.

Program SAF 2.4.3.2: Examine proposed public infrastructure projects for potential water recharge opportunities.

Policy AG 1.2.2: Use sustainable open space management practices.

Program AG 1.2.2.1: Encourage practices that reduce the strain on the hydrological infrastructure.

Program AG 1.2.2.2: Encourage practices that reduce wastewater demand on the flow-limiting wastewater pipe under Highway 99.

Program AG 1.2.2.3: Enact open-space zoning, such as exclusive agriculture zones, large-lot zones, and overlay zones for hazard areas, to be consistent with this plan.

Policy AG 3.1.2: Prepare for McFarland's water needs.

Program AG 3.1.2.1: Cooperate with regional, state, and federal agencies such as Drought.gov and the National Integrated Drought Information System (NIDIS) to accurately understand the water demand.

Program AG 3.1.2.2: Cooperate with agricultural industry stakeholders in the City and its Sphere of Influence to promote drought readiness measures.

Program AG 3.1.2.3: Adopt water-wise landscaping at public facilities and parks to reduce demand.

Program AG 3.1.2.4: Showcase drought tolerant landscapes, for instance, with model water-efficient landscapes in public parks, that private citizens could emulate to help encourage broad adoption.

Applicable Regulations:

Groundwater Management Act

Groundwater Elevation Monitoring Program Act

Urban Water Conservation Act

Water Conservation Act (SB X7-7)

SB610 and SB 221 (Urban Water Management Requirements)

AB 2572 (Water Metering Requirements)

Model Landscape Ordinance (AB1881)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

HY – 3 BUILD-OUT OF THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT IMPACTS REGARDING SUBSTANTIALLY ALTERING 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.

Development of the proposed Plan would involve vegetation removal, earth excavation and grading, and the construction of new structures. These activities could have an impact on the drainage pattern through an increase in erosion from construction activities and an increase in impervious surfaces. However, erosion control measures are to be implemented and regulated for any proposed project greater than one acre. Individual projects are also to mitigate any on- or off-site erosion impacts through project-level

CEQA. The following policies and programs can also aid in mitigating erosion impacts to the drainage pattern:

Policy LU 2.1.1: Increase the amount of infill development in the City.

Program LU 2.1.1.1: Allocate investments in infrastructure to support private investment and development.

Policy LU 3.1.1: Reduce conflicts between incompatible land uses.

Program LU 3.1.1.1: Establish mandatory distances between land uses to conform with the standards for complementary uses, such as parks, active commercial areas, public facilities, and housing.

Policy PF 1.2.3: Accommodate future need for stormwater infrastructure.

Program PF 1.2.3.1: Examine existing stormwater capacity and project increases in runoff.

Program PF 1.2.3.2: Pursue the creation of new stormwater basins and facilities to match increases in population and area.

Policy AG 1.2.2: Use sustainable open space management practices.

Program AG 1.2.2.1: Encourage practices that reduce the strain on the hydrological infrastructure.

Applicable Regulations:

Clean Water Act

State Updated Model Landscape Ordinance (AB 1881)

State Water Resources Control Board's 303(d) list

Central Valley Water Quality Control Plan

Significance Before Mitigation: Less than significant

HY – 4 IMPLEMENTATION OF THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT RESULTS REGARDING SUBSTANTIALLY ALTERING 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 SUBSTANTIALLY INCREASE THE RATE OR AMOUNT OF SURFACE RUNOFF IN A MANNER WHICH WOULD RESULT IN FLOODING ON- OR OFF-SITE.

Build-out of the proposed Plan will increase the number of impervious surfaces within the City. Drainage patterns have the potential to be altered through an increase in the rate and volume of stormwater runoff due to the increase in impervious surfaces.

McFarland owns nine sump basins for flood and storm control; however, additional sump basins have been identified for future development. This would help to alleviate potential runoff from developments. In addition, the following General Plan policies and programs can mitigate this impact further, creating a less than significant impact:

Policy LU 2.1.1: Increase the amount of infill development in the City.

Program LU 2.1.1.1: Allocate investments in infrastructure to support private investment and development.

Program LU 2.1.1.2: Streamline the permitting process for infill development.

Policy SAF 2.2.2: Reduce flood risk for new development and critical infrastructure.

Program SAF 2.2.2.1: Prior to development, encourage flood risk assessment and possible mitigation measures to reduce risks to life and property.

Program SAF 2.2.2.2: Prohibit development in the 100-year flood plain unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.

Policy SAF 2.2.3: Protect essential facilities from flooding by implementing flood control measures and relocating facilities when needed.

Policy CON 1.1.1: Prioritize flood control projects identified in the Storm Drain Master Plan.

Program CON 1.1.1.1: Complete and implement the McFarland Storm Drain Master Plan by 2035, prioritizing improvement near East Perkins Avenue within the 100-year flood plain.

Program CON 1.1.1.2: Implement new or expand existing sump basins for any new development within 100 and 500-year flood plains.

Program CON 1.1.1.3: Create an evacuation plan for vulnerable residential areas east of Highway 99.

Program CON 1.1.1.4: Apply for the Urban Flood Protection Program to help offset the costs of upgrading current infrastructure.

Policy PF 1.2.3: Accommodate future need for stormwater infrastructure.

Program PF 1.2.3.1: Examine existing stormwater capacity and project increases in runoff.

Program PF 1.2.3.2: Pursue the creation of new stormwater basins and facilities to match increases in population and area.

Policy AG 1.2.2: Use sustainable open space management practices.

Program AG 1.2.2.1: Encourage practices that reduce the strain on the hydrological infrastructure.

Program AG 1.2.2.2: Encourage practices that reduce wastewater demand on the flow-limiting wastewater pipe under Highway 99.

Applicable Regulations:

National Flood Insurance program

The Cobey-Alquist Floodplain Management Act

2007 Flood Legislation

California Uniform Building Code

McFarland 2015 Storm Drain Master Plan

Significance Before Mitigation: Less than significant

HY – 5 BUILD-OUT OF THE PROPOSED PLAN WILL RESULT IN LESS-THAN-SIGNIFICANT IMPACTS REGARDING SUBSTANTIALLY ALTERING 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 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.

An increase in impervious surfaces from the development of the Plan could result in an increase in stormwater runoff and pollutants within the stormwater. The increased pollutants include oil and grease, metals, sediments, and pesticides from the increase in roadways, parking lots, rooftops, and other impervious surfaces. The water quality from stormwater runoff is regulated by the CVWQCB and the municipal stormwater requirements in the McFarland Storm Drain Master Plan. These requirements and design features aid in offsetting the potential increase in stormwater from increase in impervious surfaces. Furthermore, individual projects are to undergo project-level CEQA analysis to determine if they impact stormwater. Policies and programs that would further reduce impacts of stormwater are:

Policy LU 2.1.1: Increase the amount of infill development in the City.

Program LU 2.1.1.1: Allocate investments in infrastructure to support private investment and development.

Program LU 2.1.1.2: Streamline the permitting process for infill development.

Policy SAF 2.2.2: Reduce flood risk for new development and critical infrastructure.

Program SAF 2.2.2.1: Prior to development, encourage flood risk assessment and possible mitigation measures to reduce risks to life and property.

Program SAF 2.2.2.2: Prohibit development in the 100-year flood plain unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.

Policy SAF 2.2.3: Protect essential facilities from flooding by implementing flood control measures and relocating facilities when needed.

Program SAF 2.2.3.1: Create an inventory of essential facilities which are at risk of flood damage within the 100- and 500-year flood plains.

Policy CON 1.1.1: Prioritize flood control projects identified in the Storm Drain Master Plan.

Program CON 1.1.1.1: Complete and implement the McFarland Storm Drain Master Plan by 2035, prioritizing improvement near East Perkins Avenue within the 100-year flood plain.

Program CON 1.1.1.2: Implement new or expand existing sump basins for any new development within 100 and 500-year flood plains.

Policy PF 1.1.1: Protect water quality.

Program PF 1.1.1.1: Continue monitoring water quality and publish results as available.

Program PF 1.1.1.2: Continue to monitor the condition of pipes and general infrastructure for water distribution

Policy PF 1.2.3: Accommodate future need for stormwater infrastructure.

Program PF 1.2.3.1: Examine existing stormwater capacity and project increases in runoff.

Program PF 1.2.3.2: Pursue the creation of new stormwater basins and facilities to match increases in population and area.

Policy AG 4.3.1: Reduce air, water, and climate pollution

Applicable Regulations:

Clean Water Act

Central Valley Water Quality Control Plan

National Pollutant Discharge Elimination System

Significance Before Mitigation: Less than significant

HY – 6 BUILD-OUT OF THE PROPOSED PLAN WILL RESULT IN LESS-THAN-SIGNIFICANT IMPACTS REGARDING SUBSTANTIALLY ALTERING 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 IMPEDE OR REDIRECT FLOOD FLOWS.

An increase in development under the Plan could result in alterations to water courses as retention walls, fences, and other structures are situated on land. However, site grading and design guidelines are meant to guard against unnecessary redirection of natural flow patterns, call for creation of retention basins, and preservation of streams and creeks. Furthermore, individual projects are to undergo project-level CEQA analysis to determine if they impede or redirect flood flows. Policies and programs that would further reduce impacts of redirecting flows are:

Policy SAF 2.2.2: Reduce flood risk for new development and critical infrastructure.

Program SAF 2.2.2.1: Prior to development, encourage flood risk assessment and possible mitigation measures to reduce risks to life and property.

Program SAF 2.2.2.2: Prohibit development in the 100-year flood plain unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.

Policy CON 1.1.1: Prioritize flood control projects identified in the Storm Drain Master Plan.

Program CON 1.1.1.1: Complete and implement the McFarland Storm Drain Master Plan by 2035, prioritizing improvement near East Perkins Avenue within the 100-year flood plain.

Program CON 1.1.1.2: Implement new or expand existing sump basins for any new development within 100 and 500-year flood plains.

Policy PF 1.2.3: Accommodate future need for stormwater infrastructure.

Program PF 1.2.3.1: Examine existing stormwater capacity and project increases in runoff.

Program PF 1.2.3.2: Pursue the creation of new stormwater basins and facilities to match increases in population and area.

Applicable Regulations:

Central Valley Water Quality Control Plan

National Pollutant Discharge Elimination System

Significance Before Mitigation: Less than significant

HY – 7 BUILD-OUT OF THE PROPOSED PLAN WILL RESULT IN LESS-THAN-SIGNIFICANT IMPACTS REGARDING THE RISK OF RELEASING POLLUTANTS DUE TO PROJECT INUNDATION IN FLOOD HAZARD, TSUNAMI, OR SEICHE ZONES

McFarland does not fall within tsunami or seiche zones. However, assessor's parcel data indicates approximately 457 parcels exist within the 100-year floodplain and 1,081 parcels exist within the 500-year floodplain. These properties account for 55% of homes in McFarland. Approximately 2,380 people live within the 100-year floodplain and 5,540 live within the 500-year floodplain. The proposed Plan limits additional residential growth in identified 100-year or 500-year flood plains without appropriate mitigation. In addition, the Plan proposes several policies and objectives to further reduce impacts of the flooding on new development.

Policy SAF 2.2.2: Reduce flood risk for new development and critical infrastructure.

Program SAF 2.2.2.1: Prior to development, encourage flood risk assessment and possible mitigation measures to reduce risks to life and property.

Program SAF 2.2.2.2: Prohibit development in the 100-year flood plain unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.

Policy SAF 4.1.1: Prepare emergency centers and critical infrastructure for hazards.

Program SAF 4.1.1.3: Identify hazards and vulnerable populations needing emergency shelters for all hazards including flooding and extreme heat events.

Program SAF 4.1.1.4: Coordinate with county, state, and federal agencies on emergency preparedness.

Program SAF 4.1.1.5: Situate emergency centers to withstand 500-year floods.

Program HO 1.3.1.1: Expand housing to the west of the City away from floodable areas.

Applicable Regulations:

The Cobey-Alquist Act (1969(

National Pollutant Discharge Elimination System

Significance Before Mitigation: Less than significant

HY – 8 WITH MITIGATION, BUILD-OUT OF THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT REGARDING CONFLICT WITH OR OBSTRUCTION OF THE IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN.

An increase in development under the Plan could increase surface runoff, its pollution, and subsequent degradation of water supply sources. McFarland is in a region with perennial shortage of water and a depleting groundwater aquifer. Growth in people and activities is likely to exacerbate the situation. CVWQCB regulates water quality while SSJMUD protects and manages groundwater for sustainability. This prompted the preparation of a Sustainable Ground Water Management Plan. The Management Area Plan outlines the SSJMUD's (the District) efforts to comply with California state regulated Sustainable Groundwater Management Act (SGMA) of 2014 which requires groundwater basins to achieve a balanced average inflow and outflows of water. Groundwater is used in this region to support agricultural production and industrial practices that support the economic viability of local communities. Policies and programs in the Plan aim at collaborating with these agencies to assure the quality and sustainability of the area's groundwater, which would change impacts to less than significant. They are:

Policy SAF 2.4.3: Identify groundwater recharge locations where soil and geography allow for infiltration.

Program SAF 2.4.3.3: Identify and evaluate potential land holdings to be purchased and used as spreading ponds

Program CON 2.1.2.3: Prepare an urban water management plan (UWMP) as population grows and the City's service area expands to comply with SB 7X-7 (Water Conservation Act of 2009). Develop the plan to decrease water use in public landscapes by 25% of 2018 levels by 2035. Convert existing landscapes to drip systems and replace landscapes requiring significant irrigation with drought tolerant vegetation.

Program PF 1.1.1.1: Continue monitoring water quality in accordance with SSJMUD monitoring standards and publish results as available.

Objective AG 2.4: Achieve groundwater sustainability by 2040

Policy AG 2.4.1: Collaborate and maintain consistency with SSJMUD Management Area Plan

Program AG 2.4.1.1: Encourage participation in SSJMUD In-Lieu Recharge Incentive Program.

Program AG 2.4.1.2: Encourage improvements to individual farming operations that address water use efficiency through SSJMUD On-Farm Efficiency Incentive Program

Program AG 2.4.1.3: Encourage improvements to individual farming operations that address groundwater protection and recharge through SSJMUD On-Farm Recharge Activities Incentive Program.

Program AG 2.4.1.4: Prioritize conversion of lands with lower agricultural potential and non-Williamson Act contract lands from agricultural use to urban use as necessary to accommodate growth.
Program AG 2.4.1.5: Encourage participation in SSJMUD in-District Allocation Structure, which would allow for the transfer of groundwater pumping credits within the District.
Program AG 2.4.1.6: Support SSJMUD to develop and implement a voluntary land fallowing program during droughts when the District may not be able to meet in-District demand from increases in the volume of imported water.
Program AG 2.4.1.7: Support SSJMUD in imposing restrictions that limit groundwater pumping when the District or the entire Subbasin are nearing a condition where they are unable to meet sustainable management criteria even with the implementation of the projects and management actions in the SSJMUD Management Area Plan.

Program AG 3.1.1.1: Encourage water-saving measures in farming through user education in McFarland and its sphere of influence to reduce water use and maintain groundwater levels.

Applicable Regulations:

Clean Water Act

Central Valley Water Quality Control Plan

National Pollutant Discharge Elimination System

Sustainable Groundwater Management Act (2014)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

4.9.4 Summary of Potential Impacts and Mitigation Measures

The following mitigation measures are intended to mitigate potentially significant impacts regarding hydrology and water quality.

HY – 2 THE PROPOSED PLAN WOULD RESULT IN POTENTIALLY SIGNIFICANT IMPACTS REGARDING SUBSTANTIALLY DECREASING GROUNDWATER SUPPLIES OR INTERFERING SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN.

The future development proposed by the Plan would result in an increase in impervious surfaces which may interfere with the groundwater recharge. However, regulations for stormwater require various measures that aim to improve on-site retention and drainage improvements.

The future growth of the Plan also increases the demand for water usage through increase in population and development. McFarland depends on groundwater from wells to provide water for residential uses, commercial uses, and firefighting. However, the Plan focuses on water conservation and strategies to reduce water use and to mitigate the increased demand for water.

Mitigation HY-2a:

Expand wastewater treatment allowing for additional wastewater to be recycled for agricultural irrigation to reduce consumption of fresh groundwater and recharge the supply.

Mitigation HY-2b:

Develop a water management plan to use recycled water in excess of agricultural demand for other purposes.

Mitigation HY-2c:

Adopt a water efficient landscape ordinance to reduce the amount of potable water used for landscape irrigation.

Mitigation HY-2d:

Comply with all State of California Water Conservation measures

Significance After Mitigation: Less than significant.

HY – 8 BUILD-OUT OF THE PROPOSED PLAN WOULD HAVE A POTENTIALLY SIGNIFICANT IMPACT REGARDING CONFLICT WITH OR OBSTRUCTION OF THE IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN.

An increase in development under the Plan could increase surface runoff, its pollution, and subsequent degradation of water supply sources. McFarland is in a region with perennial shortage of water and a depleting groundwater aquifer. The Southern San Joaquin Municipal Utility District's (SSJMUD) Management Area Plan outlines efforts to comply with California state regulated Sustainable

Groundwater Management Act (SGMA) of 2014 which requires groundwater basins to achieve a balanced average inflow and outflows of water. Groundwater is used in this region to support agricultural production and industrial practices that support the economic viability of local communities. Policies and programs in the Plan aim at collaborating with these agencies to assure the quality and sustainability of the area's groundwater, which would change impacts to less than significant.

Mitigation HY-8a: Develop a water management plan to use recycled water in excess of agricultural demand for other purposes.

Mitigation HY-8b: Comply with all State of California Water Conservation measures and the Sustainable Groundwater Management Act.

Significance After Mitigation: Less than significant.

4.9.5 References

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4.10 Land Use and Planning

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Physically divide an established community?			x	
2. 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?			x	

4.10.1 Environmental Setting

This section discusses the environmental setting regarding land uses in the City of McFarland.

4.10.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the Land Use element and potential impacts of the proposed Plan.

Federal Regulations

McFarland does not directly follow federal regulations that govern land use decisions.

State Regulations

Government code §65300-65303

Each city will prepare a comprehensive, long-term general plan which includes mandatory elements and directs future growth and development.

Governor's office of Planning and Research (OPR)

The land use element of the general plan must identify and describe land uses within planning boundaries, including location and allowable density and intensity of use. A sufficient number of land use categories

will be contained in the plan to distinguish between allowable uses in a given location. The land use element of the general plan will be particularly useful in guiding decision-making related to zoning, subdivision, and public works.

Sphere of Influence

The Cortese-Knox Act (1986) established a Local Agency Formation Commission (LAFCO) in each county in California with the authority to review, approve, or deny proposals for boundary changes or incorporations in cities, counties, or special districts. LAFCOs establish a "sphere of influence" for cities within their jurisdiction. The sphere of influence (SOI) describes probable future service areas and physical boundaries.

Local Regulations

Planning for McFarland is influenced by multiple agencies, including the Kern Council of Governments (Kern COG), the Kern County Planning and Natural Resources Department, the San Joaquin Valley Air Pollution Control District, and the City of McFarland. Documents produced by these agencies contain policies that impact land use within McFarland's planning area as listed below.

City of McFarland Municipal Code: Title 17

Title 17 of the City of McFarland Zoning Code provides regulations concerning zoning districts. The code has been established to serve the public's health, safety, comfort, convenience, and general welfare, and to provide the economic and social advantages resulting from an orderly, planned use of land resources, and to encourage, guide, and provide a definitive plan for the future growth and development of the City.

Kern County General Plan

The Kern County General Plan Land Use Element provides a variety of policies concerning land use in Kern County. Land use in the City of McFarland is directly impacted by this plan through its policies that affect land use in area within the City's Spere of Influence.

Kern Council of Government's Regional Transportation Plan

The 2018 Regional Transportation Plan (RTP) is a 24-year blueprint from Kern COG that establishes a set of regional transportation goals, policies, and actions intended to guide the development of multimodal transportation systems in Kern County. The RTP has oversight over the environmental impacts of proposed development and establishes air quality conformity.

4.10.1.2 Existing and baseline Conditions

The Cal Poly planning team conducted a land use inventory in McFarland from October 18, 2019 to October 20, 2019, categorizing all parcels in the City into the following categories: residential, institutional, commercial, industrial, parks, agriculture, and vacant. The City of McFarland has a total area of 1,343.95 acres. The following sections discuss the acreages and allowable uses for each land use category, along with the existing land use standards in McFarland.

Map 4.10-1 shows the land use designations of parcels within City limits, omitting the discontinuous portion of the City for ease of viewing. Table 4.10-1 shows the acreages and percentages of each land use category; Figure 4.10-1 is a graphical depiction of Table 4-10.

MAP 4.10-1: LAND USE MAP OF MCFARLAND, 2019

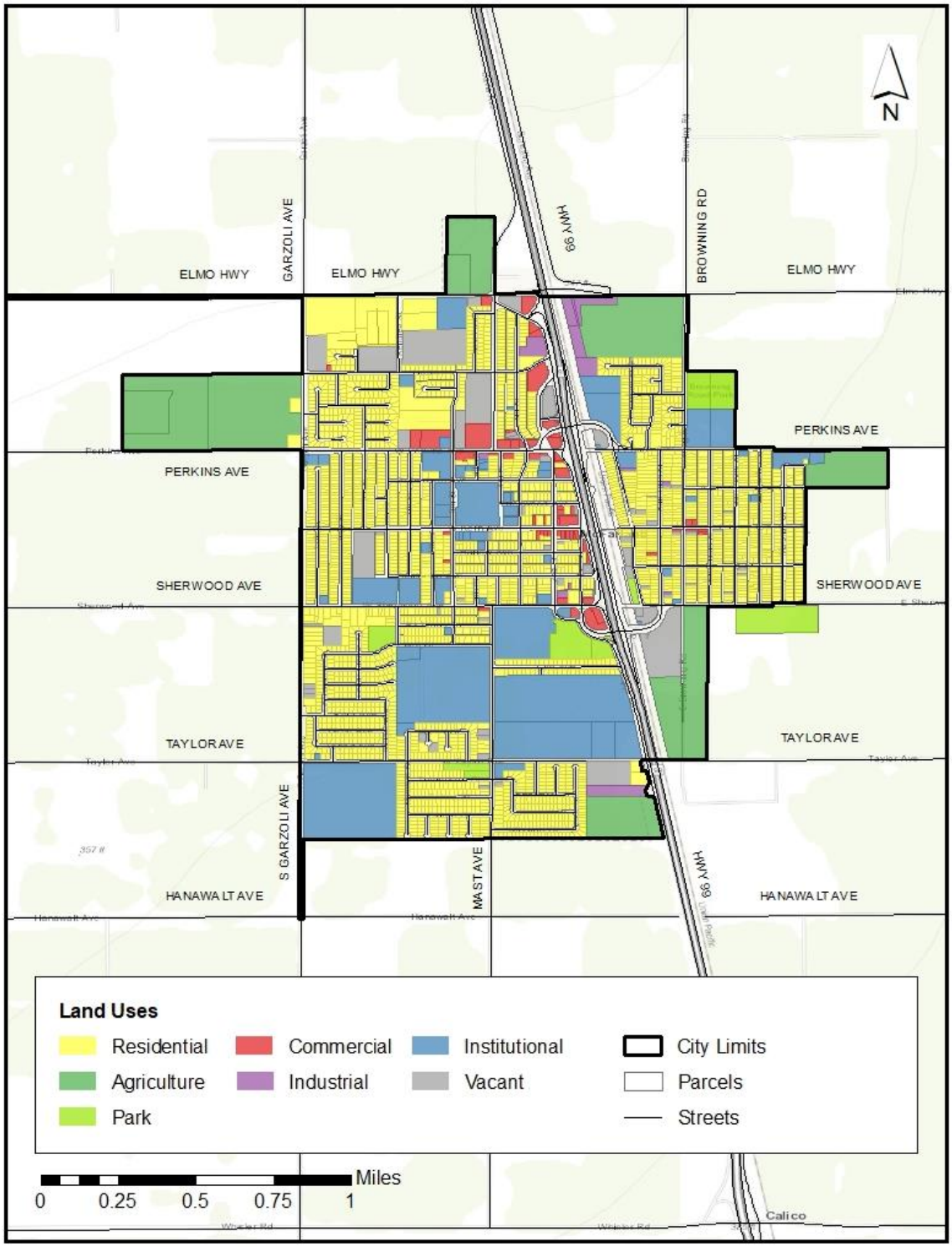
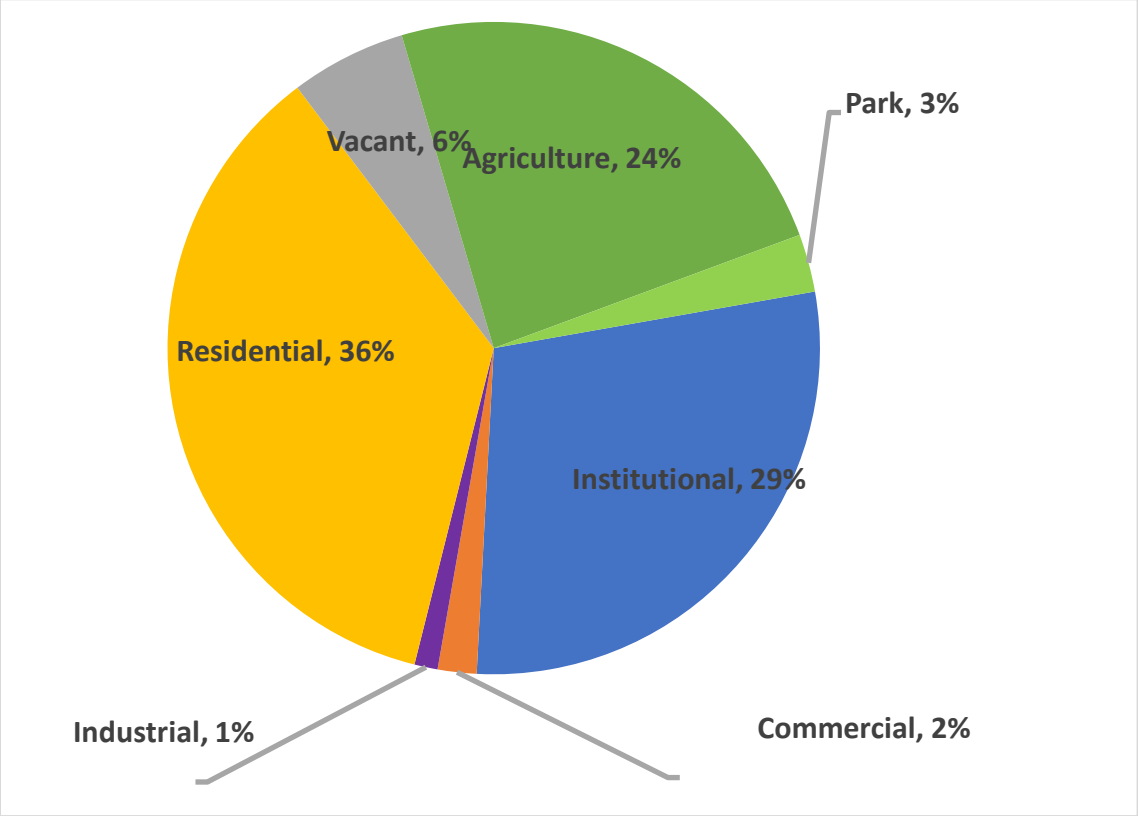


TABLE 4.10-1: LAND USE DISTRIBUTION, 2019

LAND USE	ACREAGE	PERCENT
Agriculture	321.35	24%
City Parks	38.51	3%
Residential	481.24	36%
Commercial	25.87	2%
Industrial	15.48	1%
Institutional	384.52	29%
Vacant	76.98	6%
Total	1,343.95	100%

FIGURE 4.10-1: DISTRIBUTION OF LAND USES, 2019



Open Space: City Parks & Agriculture

City parks and agriculture occupy 359.86 acres of McFarland, as shown in Table 4.10-2. This is about 27% of the total acreage of the City.

TABLE 4.10-2: OPEN SPACE LAND USE DISTRIBUTION, 2019

Land Use	Acreage	Percent of Open Space
Agriculture	321.35	89%
City Parks	38.51	11%
Total	359.86	100%

City Parks

There are six City parks in McFarland that total 38.51 acres and consist of 3% of the City's total land. McFarland Park is in the heart of downtown McFarland, south of Sherwood Avenue and west of Highway 99. Browning Road Park, shown in Figure 4.10-2, is located on the northeast side of the City, north of Perkins Avenue and East of Browning Road. Sherwood Park is located on the west side of the City, south of Sherwood Avenue and bordered by Ebell Street to the south and Woodruff Avenue to the east. Ritchey Park is located on the southwest side of McFarland and is bordered by Taylor Avenue to the north and Mast Avenue to the East. Blanco Park is one of McFarland's newest parks, named after long-time local high school cross country coach Jim "Blanco" White. Blanco Park is located on the east side of McFarland, south of Sherwood Avenue. There is also a new park and playground located on the east side of McFarland, located just north of the Sherwood Avenue Highway 99 interchange ramp.

FIGURE 4.10-2: BROWNING ROAD PARK IN MCFARLAND

Agriculture

Agriculture occupies 321.35 acres of McFarland, located mainly on the outskirts of the City and accounting for about 24% of the City's total land. Agriculture includes the production of crops, vineyards, and orchards. Agriculture is a critical component of both McFarland's and Kern County's economies.

Residential

Residential land use consists of 481.24 acres, 36% of the City's land area, and is dispersed throughout McFarland. About 95% of residential land in the City is single family homes, the most prominent residential housing type. Apartments make up about 5% of the City's residential land, while mobile homes make up less than 1%, as seen in Table 4.10-3.

TABLE 4.10-3: RESIDENTIAL LAND USE BREAKDOWN BY PARCEL AND ACREAGE, 2019

Residential Land Use	Parcels	Acreage	Percent of Residential Acreage	Percent of Residential Parcels
Single Family	2,611	455.15	95%	99%
Apartment	25	25.50	5%	1%
Mobile Home	3	0.59	<1%	<1%
Total	2639	481.24	100%	100%

McFarland's 1991 General Plan designates five types of residential land use: rural residential, estate residential, low density residential, medium density residential, and high density residential.

Rural Residential

The City of McFarland uses this land use category to indicate areas for single-family homes on rural land within the City. The maximum density within rural residential areas is 2 dwelling units per acre, with lot sizes ranging from 20,000 square feet to 2.5 acres. Figure 4.10-3 shows a rural residential property on Garzoli Avenue within City limits.

Estate Residential

The City of McFarland uses this land use category to indicate areas for single-family homes on larger lots within the City. The maximum density within estate residential areas is 4 dwelling units per acre, with lot sizes ranging from 8,000 square feet to 20,000 square feet.

FIGURE 4.10-3: RURAL RESIDENTIAL PROPERTY ON GARZOLI AVENUE

Low Density Residential

The City of McFarland uses this land use category to indicate areas for single-family homes within McFarland's City limits. The maximum density within low density residential areas is 8 dwelling units per acre, with lot sizes ranging from 5,000 square feet to 8,000 square feet. Figure 4.10-4 shows a single-family home in a new neighborhood in Southwest McFarland, bordered by Taylor Avenue to the south and Garzoli Avenue to the west.

FIGURE 4.10-4: SINGLE FAMILY HOME IN SOUTHWEST MCFARLAND, OFF TAYLOR AVENUE

Medium Density Residential

The City of McFarland uses this land use category to indicate areas for duplexes and triplexes, although the City also allows single-family homes in this zone. The maximum density within medium density residential areas is 15 dwelling units per acre, with lot sizes ranging from 3,000 square feet to 5,000 square feet.

High Density Residential

The City of McFarland uses this land use category to indicate areas for multi-family residences including duplexes, triplexes, and apartments, although the City also allows single-family homes in this zone. The maximum density within high density residential areas is 24 dwelling units per acre. Apartment complexes in McFarland include Solinas Village Apartments, Daybreak Apartments, and the newest apartment complex in McFarland, Kendrea Place Apartments in North McFarland, located along Elmo Highway, as pictured in Figure 4.10-5.

FIGURE 4.10-5: KENDREA PLACE APARTMENTS IN NORTH MCFARLAND, ALONG ELMO HIGHWAY

Commercial

The Commercial land use designation indicates a range of commercial land uses applicable to the planning area, including office, retail, and service locations. Figure 4-10-6 shows one example of commercial uses in McFarland along Kern Avenue in Downtown. Table 4.10-4 shows the distribution of commercial land use in McFarland by acreage of commercial property and percentage of total land use from the planning team's 2019 land use inventory. Total commercial acreage is 25.87 acres, with the service sector comprising 64%, retail comprising 35%, and office comprising 1%.

TABLE 4.10-4: COMMERCIAL LAND USE DISTRIBUTION, 2019

Land Use	Acreage	Percent of Commercial
Office	0.38	1%
Retail	9.03	35%
Service	16.46	64%
Total	25.87	100%

Office

Office commercial land use designation includes professional, business, and financial-related units. McFarland has 0.38 acres, or 1.47% of the total commercial acreage designated for office space.

Retail

The Retail land use designation includes shops and restaurants. Retail land use in McFarland accounts for 9.03 acres, or 34.91% of the City's total commercial acreage.

Service

The Service land use designation includes fueling stations, salons, hotels, and storage units. There are 16.46 acres of service-designated land, or 63.63% of the total commercial acreage in McFarland.

FIGURE 4.10-6: COMMERCIAL USES ON KERN AVENUE IN DOWNTOWN MCFARLAND

Institutional

The Institutional land use designation includes municipal facilities such as police and fire stations, churches, schools, and government buildings, such as the McFarland Veterans Community Building shown in Figure 4.10-7. Institutional uses in McFarland occupy 207.33 acres, which equates to 4.76% of the City's total acreage. Table 4.10-5 shows the breakdown of acreage for institutional uses in McFarland.

TABLE 4.10-5: INSTITUTIONAL LAND USE DISTRIBUTION, 2019

LAND USE	ACREAGE	PERCENT
Church	21.74	6%
Civic / Government	5.73	2%
Drainage	20.05	5%
Fire	0.62	<1%
Police	1.47	<1%
Prison	62.31	16%
Public Facilities	157.72	41%
School	114.88	30%
Total	384.52	100%

FIGURE 4.10-7: MCFARLAND VETERANS COMMUNITY BUILDING

Industrial

The Industrial land use designation refers to all industrial activities present in McFarland, including many agricultural services and industries. There are 15.48 acres designated as Industrial land in McFarland.

Mixed-Use

The City of McFarland is working to define a "Mixed Use Development" (MUD) zoning category. The need for this new zone arose out of the South McFarland General Plan Amendment, and the designation is still in a nascent stage. The planning team will continue to monitor this emerging category for inclusion in the General Plan update.

Waste

Waste land use areas include public facilities that clean up, collect, and store solid and liquid waste. For the purposes of the Land Use Element, waste facilities are classified as Public Facilities within the Institutional land use category. The City operates an 80-acre wastewater treatment plant with adequate capacity to handle the City's needs and the growth anticipated by the General Plan. The wastewater treatment plant can handle 1.55 million gallons per day (GPD) with an average monthly flow of 1.1 million GPD. The wastewater treatment plant is shown in Figure 4.10-8 and is located west of the City along Melcher Road between Sherwood Avenue and Elmo Highway. The wastewater treatment plant is surrounded by agricultural land outside of City limits. The City is considering increasing the capacity of the wastewater treatment plant through an expansion project in the future. The nearest solid waste landfill to McFarland is the McFarland-Delano landfill in the City of Delano to the north.

FIGURE 4.10-8: MCFARLAND WASTEWATER TREATMENT PLANT, ALONG MELCHER ROAD

There are 74.23 acres of vacant land in McFarland, accounting for 6% of the total area of the City.

4.10.2 Standards of Significance

4.10.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to land use if it would:

1. Physically divide an established community;
2. 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.

4.10.2.2 Methodology

To review the potential cumulative impacts on land use and planning that may result from the adoption of the proposed 2040 General Plan, the Plan goals, objectives, policies, and programs of the proposed Plan are evaluated along with other sources of information and documentation. These are compared to existing conditions to determine the level of impact on land use and planning in the proposed Plan area.

4.10.3 Impact Discussion

The following is a discussion of the environmental impacts of the Plan with regard to land use and planning.

LU – 1 The proposed Plan would have a **less-than-significant** impact regarding physically dividing an established community.

The proposed Plan is a long-range policy document designed to help guide future development that would complement the existing land use pattern of the City of McFarland while also aiding community development. The proposed Plan includes expansion of growth on both sides of Highway 99 which already physically divides the community. To maintain the City's small-town character and preserve open space, the proposed Plan provides policies and programs for infill development, the creation of neighborhood centers, and enhanced mobility options for all modes of transportation, increasing connectivity across Highway 99 and throughout the City.

Policy LU 1.2.1: Pursue regulatory and investment strategies that promote a healthy mix of uses (e.g., retail, residential, office, and public facilities) in the downtown core.

Program LU 1.2.1.1: Establish residential-commercial mixed uses downtown.

Program LU 1.2.2.1: Establish strategic mixed-use nodes of commercial and office uses to serve nearby neighborhoods along Garzoli Avenue at Perkins, Sherwood, and Taylor Avenues and along East Kern Avenue.

Program LU 1.5.1.3: Improve street or pathway connections to resources, services, activities, and each other.

Policy LU 2.1.2: Prohibit leapfrog development.

Program LU 2.1.2.1: Encourage new development and annexation projects to be contiguous to City limits.

Program LU 2.1.2.2: Develop urban growth boundaries.

Policy LU 2.1.3: Focus future commercial development in existing commercial corridors.

Program LU 2.1.3.1: Develop streamlined permitting process for designated commercial uses along Kern Avenue, Perkins Avenue, Garzoli Avenue, and Sherwood Avenue.

Objective CIR 4.3: Improve connectivity between the east and west side of the City.

Policy HO 1.3.3: Locate new residential developments near amenities such as grocery stores, public parks, and schools.

Program HO 1.3.3.1: Increase residential density downtown, in the residential expansion west of Garzoli Avenue from Elmo Highway to Taylor Avenue.

Applicable Regulations: None

Significance Before Mitigation: No impact

LU – 2 THE PROPOSED PLAN WOULD CAUSE A LESS-THAN-SIGNIFICANT ENVIRONMENTAL IMPACT REGARDING CONFLICT WITH ANY APPLICABLE LAND USE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT.

According to California state law, the General Plan is the primary document for guiding the direction of physical development within a city. Adoption of the plan will update policies and land use designations to accommodate future growth and could therefore be inconsistent with existing regulations. The City's zoning ordinance, which translates the General Plan policies into specific land use regulations, development standards, and performance criteria to manage development on individual parcels, would necessarily change to continue to implement the General Plan. To maintain consistency after the adoption of a new general plan, a city must also update its zoning ordinance and map. In this case, the City of McFarland is to update the Zoning Ordinance and Zoning Map within a reasonable timeframe to supplement the proposed Plan and provide consistency across land use policies and regulations. The proposed Plan does not conflict with any Specific Plan and could require updates to other City regulations, including the Municipal Code to ensure consistency. Therefore, the proposed Plan includes the following policies and programs that require compliance or revisions in City regulations to ensure consistency:

Policy LU 1.1.1: Expand the range of allowable housing types and areas in which they may be built.

Program LU 1.1.1.1: Allow increased density near the downtown core and commercial centers.

Program LU 1.1.1.2: Create inclusionary zoning for new construction to include a portion of affordable units.

Program LU 1.1.1.3: Remove regulatory obstacles that have the effect of rendering various housing types uneconomical, such as unnecessary onerous parking per residential unit.

Program LU 1.1.1.4: Allow and facilitate accessory dwelling units (ADUs).

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Program LU 3.1.1.1: Establish mandatory distances between land uses to conform with the standards for complementary uses, such as parks, active commercial areas, public facilities, and housing.

Applicable Regulations:

City of McFarland Municipal Code

Draft McFarland 2040 General Plan

Significance Before Mitigation: Less than significant

4.10.4 Summary of Potential Impacts and Mitigation Measures

As there are no potentially significant impacts associated with land use, mitigation measures are not required.

4.10.5 References

Ballantine, J. J. (2011). City of McFarland Land Use Element Update. Digital Commons, California Polytechnic State University San Luis Obispo.

City of Bakersfield. (2002). Metropolitan Bakersfield General Plan. Retrieved from http://docs.bakersfieldcity.us/weblink/0/doc/1273241/Page1.aspx

City of McFarland. (2020). City of McFarland Land Use Element. Retrieved from https://www.mcfarlandcity.org/326/McFarland-General-Plan-Updated-Elements

State of California. (2019). General Plan Guidelines. Retrieved from http://opr.ca.gov/planning/general-plan/

4.11 Mineral Resources

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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?			x	
2. 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?			x	

4.11.1 Environmental Setting

This section discusses the environmental setting regarding mineral resources in the City of McFarland.

4.11.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to the Land Use element and potential impacts of the proposed Plan.

Federal Regulations

United States Environmental Protection Agency Superfund Program

The Superfund Program is a federally sponsored program to remediate the nation's uncontrolled or abandoned hazardous waste sites. There are no Superfund sites within existing or future city limits or Sphere of Influence.

State Regulations

California Department Of Conservation

The main state agency concerned with mineral resources protection is the California Department of Conservation. Public Resources Code §600-690 gives this agency the authority to conserve earth resources. Five program divisions have relevant jurisdiction, including: the California Geologic Survey; the Division of Oil, Gas, and Geothermal Resources; the Division of Land Resource Protection; the Division of Recycling; and the Office of Mine Reclamation.

State Mining And Geology Board

This agency creates policy regarding the development and conservation of mineral resources and reclamation of mined lands.

California State Lands Commission

This agency manages land, waterways, and resources on public property.

California Department Of Parks And Recreation

This agency manages mining activities and mineral resources on State Park lands.

California Department Of Fish And Wildlife

This agency handles issues concerning potential threats from mining on terrestrial and marine fauna. Permitting includes spill prevention and response, as well as dredging.

Surface Mining And Reclamation Act (SMARA)

The Surface Mining and Reclamation Act of 1975 provides a comprehensive policy to regulate surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. The State Mining and Geology Board is required to adopt state policy for the reclamation of mined land and the conservation of mineral resources. Policies regarding reclamation are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1. According to §2733 of the Surface Mining and Reclamation Act, reclamation is defined as the combined process of land treatment that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, erosion, and other adverse effects from surface mining operations, including adverse surface effects incidental to underground mines, so that mined lands are reclaimed to a usable condition which is readily adaptable for alternate land-uses and create no danger to public health or safety.

Section 2761(a) and (b) provides a process by which land shall be identified based on urban expansion and land uses that would preclude the extraction of mineral resources. The state Geologist will classify areas based on geologic factors without the regard of existing land use and land ownership. Areas are categorized into four Mineral Resource Zones (MRZs). MRZ-2 is of the highest significance. They are characterized by an area that contains mineral deposits and are of regional or statewide significance. Pursuant to §2762, if an MRZ-2 area is found to be within the Plan area, the lead agency shall, in

accordance to state policy, establish mineral resource management policies to be incorporated in its General Plan that will:

1. Recognize mineral information classified by the State Geologist and transmitted by the board.
2. Assist in the management of land use that affects access to areas of statewide and regional significance.
3. Emphasize the conservation and development of identified mineral deposits.

Local Regulations

If the City of McFarland were to approve drilling permits for oil, its municipal code outlines specific no-drilling areas codified in the conventional use permit. There are no existing oil drilling operations within McFarland.

Mineral extraction operations do not exist in the City of McFarland, but there are operations within Kern County. The City has restrictions in its municipal code that do not allow mining operations within McFarland.

4.11.1.2 Existing and baseline Conditions

Mineral and petroleum resources are the basis of the economy in Kern County. The primary activity in Kern County is petroleum extraction, however other economic mineral resources include borax, cement production, and construction aggregates (Kern County Planning Department, 2009). In 2009, Kern County produced more oil than in any other county in both California and the nation; ten percent of the Nation's total oil production occurred in Kern County.

While Kern county is one of the top counties for oil production in California, there are currently no oil or mineral operations in McFarland.

4.11.2 Standards of Significance

4.11.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant impact on the environment with respect to mineral resources if it would:

1. 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;
2. 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.

4.11.2.2 METHODOLOGY

Determination of the impacts of the proposed Plan on mineral resources in McFarland are based on review of the proposed Plan, as well as relevant reports and surveys. This includes data from the California Department of Conservation, U.S. Geological Survey, and California Geological Survey.

4.11.3 IMPACT DISCUSSION

MR– 1 THE PROPOSED PLAN WOULD RESULT IN A LESS-THAN-SIGNIFICANT LOSS OF AVAILABILITY OF A KNOWN MINERAL RESOURCE THAT WOULD BE OF VALUE TO THE REGION AND THE RESIDENTS OF THE STATE.

Mineral extraction operations do not exist in the City of McFarland, but there are operations within Kern County. The City has restrictions in its municipal code that do not allow mining operations within McFarland. However, expansion in physical development would require extraction of stones, gravel, and sand, which might come from other parts of the region. Therefore, buildout of the proposed Plan could result in a less-than-significant loss of known mineral resources.

Applicable Regulations:

Surface Mining and Reclamation Act (SMARA)

Significance Before Mitigation: Less than significant

MR – 2 THE PROPOSED PLAN WOULD RESULT IN A LESS-THAN-SIGNIFICANT LOSS OF AVAILABILITY OF A LOCALLY-IMPORTANT MINERAL RESOURCE RECOVERY SITE DELINEATED ON A LOCAL GENERAL PLAN, SPECIFIC PLAN, OR OTHER LAND USE PLAN.

As referenced under MR-1, there are no existing mining operations in the City of McFarland. However, the need for building stones, gravel, and sand during expansion in physical development could potentially deplete a local quarry. Therefore, buildout of the proposed Plan could result in a less-than-significant loss of a locally-important mineral resource recovery site.

Applicable Regulations:

Surface Mining and Reclamation Act (SMARA)

Significance Before Mitigation: Less than significant

4.11.4 Summary of Potential Impacts and Mitigation Measures

Mitigation measures are not necessary, as the proposed Plan will not result in any potentially significant impacts to mineral resources.

4.11.5 References

California Department of Conservation, California Geological Survey. (2004). The Mineral Industry of California. Retrieved from http://minerals.usgs.gov/minerals/pubs/state/2004/castmyb04.pdf

USGS. (2020). Mineral Resources Data System.

4.12 Noise

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			x	
2. Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?			x	
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				x

4.12.1 Environmental Setting

This section discusses the environmental setting regarding noise levels within the City of McFarland.

The following terms are used throughout this topical section:

- **Ambient Noise:** The composition of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

- **A-Weighted Decibel (dBA):** Measures a sound in a manner similar to the response of the human ear and gives a good correlation with a person's reaction to noise.
- **Community Noise Equivalent Level (CNEL):** The average equivalent A-weighted decibel sound level during a 24-hour day, obtained after the addition of 5 decibels to readings obtained from 7:00pm to 10:00pm and 10 decibels to sound levels in the night from 10:00pm and before 7:00am.
- **Day-Night Sound Level (Ldn or DNL):** The average equivalent A-weighted decibel sound level during a 24-hour day, obtained after the addition of 10 dB to readings obtained in the night from 10:00pm and before 7:00am.
- **Decibel (dB):** A unit of measurement describing the amplitude of sound on a logarithmic scale.
- **Equivalent Continuous Noise Level (Leq):** The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. Leq is typically computed over 1-, 8-, and 24-hour periods.
- **Intrusive Noise:** The noise which intrudes over and above the existing ambient noise at a given location.
- **Noise:** Sound that is loud, unexpected, and generally described as unwanted.
- **Noise Contours:** Lines drawn about a noise source indicating equal levels of noise exposure. CNEL and Ldn are the metrics utilized herein to describe annoyance due to noise and to establish land use planning criteria for noise.
- **Peak Particle Velocity (PPV):** The velocity of a particle in a medium as it transmits a wave.
- **Sound:** Vibrations that travel through the air or other medium that can be heard by a person or animal.
- **Statistical Sound Level (Ln):** The sound level that is exceeded "n" percent of the time during a given sample period.
- **Vibration Decibel (VdB):** Commonly used to describe vibration velocity's average amplitude. The vibration velocity level is reported in decibels of 1x10- 6 inches per second.

Table 4.12-1 describes different sounds and their associated intensity levels.

TABLE 4.12-1: SOUNDS AND THEIR ASSOCIATED INTENSITY LEVELS

SOUND DESCRIPTION	INTENSITY LEVEL
Instant Perforation of Eardrum	160 dBA
Military Jet Takeoff	140 dBA
Threshold of Pain	130 dBA
Front Row of a Rock Concert	110 dBA
Walkman at Maximum Level	100 dBA
Vacuum Cleaner	80 dBA
Busy Street Traffic	70 dBA
Normal Conversation	60 dBA
Whisper	20 dBA
Rustling Leaves	10 dBA
Threshold of Hearing	0 dBA

4.12.1.1 REGULATORY FRAMEWORK

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to noise resulting from the proposed Plan.

Federal Regulations

Department Of Housing And Urban Development (HUD): Environmental Criteria And Standards

The United States Environmental Planning Division has prepared a set of criteria and standards that are presented in 24 CFR Part 51. New residential construction qualifying for HUD financing proposed in high noise areas (exceeding 65 dBA Ldn) must incorporate noise attenuation features to maintain acceptable interior noise levels (HUD, 2014). A goal of 45 dBA Ldn is set forth for interior noise levels, and attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction, any building will provide sufficient attenuation to achieve an interior level of 45 dBA Ldn or less if the exterior level is 65 dBA Ldn or less. Approvals in a “normally unacceptable noise zone” (exceeding 65 decibels but

not exceeding 75 decibels) require a minimum of 5 decibels additional noise attenuation for buildings if the day-night average is between 65 and 70 decibels, or a minimum of 10 decibels of additional noise attenuation if the day-night average is between 70 and 75 decibels.

The Environmental Planning Division developed an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. This is a web- based application of the existing Noise Assessment Guidelines (NAG) and a component of the Assessment Tools for Environmental Compliance (ATEC). Derivations of the basic noise equation from the noise regulation were applied to a new application of the NAG.

The site acceptability standards are the following:

- **Exterior noise levels:** Proposed HUD-assisted projects with a day-night average sound level of below 65 decibels are acceptable.
- **Interior noise levels:** Proposed HUD-assisted projects with a day-night average sound level of below 45 decibels are acceptable.

Federal Highway Administration: Title 23 Of The Code Of Federal Regulations

The Federal Highway Administration (FHWA) requires that new Federal or Federal-aid highway construction projects, or alterations to existing highways that significantly change either the horizontal or vertical alignment and/or increases the number of through traffic lanes, abate noise per Title 23 of the Code of Federal Regulations. The regulation requires the following procedures when planning and designing a highway project:

- Identify traffic noise impacts and examine the potential mitigation measures;
- Incorporate reasonable and foreseeable noise mitigation measures into the highway project;
- Coordinate with local officials to provide helpful information on compatible land use planning and control.
- Abatement is required when the “worst-hour” noise levels approach or exceed 67 dBA.

Federal Transit Administration: Vibration Impact Criteria

The Vibration Impact Criteria are designed to identify acceptable noise levels for noise-sensitive buildings, residences, and institutional land uses near railroads. The Vibration Decibel (VdB) thresholds that apply to residences and buildings are:

- 72 VdB for frequent events (more than 70 events per day);
- 75 VdB for occasional events (30 to 70 events per day);
- 80 VdB for infrequent events (less than 30 events per day)

Federal Aviation Administration: Federal Aviation Regulations (Far) Part 150, Airport Noise Compatibility Planning

This document sets forth a system for measuring airport noise impacts and presents guidelines for identifying incompatible land uses. Completion of an FAR Part 150 plan by the airport is required to obtain Federal Aviation Administration funding for noise abatement.

Environmental Protection Agency (EPA): Federal Noise Control Act, 1972

The inability to control noise, particularly within urban areas, presents an issue to the health and welfare of the Nation's population. Federal action is essential when addressing major noise sources in commerce control; however, the primary responsibility for noise control rests with State and local governments. Transportation vehicles and equipment, machinery, appliances, and other products in commerce are major sources of noise. The Noise Control Act of 1972 created a national policy to protect all Americans from noise levels that might jeopardize their health or welfare. The Environmental Protection Agency (EPA) found that sleep, speech, and other types of activity would not be interfered with if the Ldn of residential areas did not exceed 55 dBA outdoors and 45 dBA indoors. The EPA also found that 5 dBA is an adequate margin of safety before the increase in noise level results in a significant increase, provided that the existing noise exposure did not exceed 55 dBA Ldn (EPA, 1972).

State Regulations

California Government Code: Section 65302(F)

California Government Code Section 65302(f) requires all General Plans to include a Noise Element that addresses noise-related impacts in the community. The State Office of Planning and Research (OPR) has prepared guidelines for the content of the Noise Element, which includes the development of current and future noise level contour maps. These maps must include contours for the following sources:

- Highways and freeways
- Primary arterial and major local streets
- Passenger and freight on-line railroad operations and ground rapid transit systems
- Commercial, general aviation, heliport, military airport operations, and all other ground facilities and maintenance functions related to airport operation.
- Local industrial plants, including but not limited to railroad classification yards.
- Other stationary ground noise sources identified by local agencies contributing to the community noise environment.

California Code Of Regulations: Title 24

The California Commission of Housing and Community Development officially adopted noise insulation standards in 1974. In 1988, the Building Standards Commission approved revisions to the standards (Title 24, Part 2, California Code of Regulations). As revised, Title 24 establishes an interior noise standard of 45 dB(A) for residential space (CNEL/Ldn). Acoustical studies must be prepared for residential structures to be located within noise contours of 60 dB(A) or greater (CNEL/Ldn) from freeways, major streets, thoroughfares, rail lines, rapid transit lines, or industrial noise sources. The studies must demonstrate that the building is designed to reduce interior noise to 45 dB(A) or lower (CNEL/Ldn).

California Code Of Regulations: Title 21

The State Division of Aeronautics has adopted a standard that establishes an acceptable noise level of 65 dB for uses within the vicinity of airports. This standard applies to typical houses in urban residential areas in California and may have windows partially open. California Building Code, Insulation Standards The State of California establishes exterior sound transmission control standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings as set forth in the 2010 California Building Code (Chapter 12, §1207.11). Interior noise levels attributable to exterior environmental noise sources shall not exceed 45 dBA Ldn/CNEL in any habitable room. When exterior noise levels (the higher of existing or future) where residential structures are to be located exceed 60 dBA Ldn/CNEL, an acoustical analysis report must be submitted with the building plans. It must describe the noise control measures that have been incorporated into the design of the project to meet the allowable interior noise level. The proposed Plan shall facilitate implementation of the noise insulation standards and shall be used to identify sites where noise levels exceed 60 dBA.

California Department Of Transportation (Caltrans): Construction Vibration

Caltrans has adopted guidance for construction vibrations, which is used in this analysis to address construction vibrations. Caltrans uses a vibration limit of 0.5-inches/sec-peak particle velocity (PPV) for new residential structures and modern industrial/commercial buildings that are structurally sound and designed to modern engineering standards. A conservative vibration limit of 0.3 inches/sec, PPV is used for older residential buildings that are found to be structurally sound. For historic buildings and some old buildings, a conservative limit of 0.25 inches/sec, PPV is used. A limit of 0.08 inches/sec, PPV is used to provide the highest level of protection for extremely fragile historic buildings, ruins, and ancient monuments. All of these limits have been used successfully, and compliance to these limits has not been known to result in appreciable structural damage. All vibration limits referred to herein apply on the ground level and consider the response of structural elements (i.e., walls and floors) to ground-borne excitation (Caltrans, 2004).

Governor's Office Of Planning And Research (OPR): General Plan Guidelines

The General Plan Guidelines produced by the Governor's Office of Planning and Research (OPR) provide the fundamental structures of a complete Noise Element in a General Plan. As part of the Noise Element development phase, OPR has provided the maximum allowable noise exposure by land use as shown in Table 4.12-2. The standards presented by the OPR reflect the noise-control goals to be applied to all communities by providing guidelines for noise-compatible land uses (OPR, 2003 & 2015).

TABLE 4.12-2: MAXIMUM ALLOWABLE NOISE EXPOSURE BY LAND USE (LDN, DB)

Normally Acceptable	Specified land use is satisfactory upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements, but with closed windows and fresh air supply systems or air conditioning with normally suffice.
Normally Unacceptable	New construction or development should generally by discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development should generally not be undertaken.

Land use category	**41-50**	**51-55**	**56-60**	**61-65**	**66-70**	**71-75**	**76-80**	**>80**
Residential Low Density Single Family, Duplex, Mobile Homes								
Residential-Multiple Family, Group Homes								
Transient Lodging-Motels/Hotels								

Land use category	41-50	51-55	56-60	61-65	66-70	71-75	76-80	>80
Schools Libraries, Churches, Hospitals, Nursing Homes								
Auditoriums, Concert Halls, Amphitheaters								
Sports Arenas, Outdoor Spectator Sports								
Playgrounds, Neighborhood Parks								
Golf Courses, Riding Stables, Water Recreation, Cemeteries								
Office Buildings, Business Commercial and Professional Office Buildings								
Industrial Manufacturing, Utilities, Agriculture								

Source: (OPR, 2003, and 2015)

Local Regulations

McFarland Municipal Code 9.14

Chapter 9.14 of the McFarland Municipal Code maintains local standards for noise regulation. It states that it is unlawful to generate noise that is calculated to "disturb the peace and good order of the

neighborhood or sleep of ordinary persons in nearby residences". The Code provides separate exemptions for emergency warnings and construction. It also establishes evidence of violation and penalties for violators of the code.

2.3.1.1. EXISTING AND BASELINE CONDITIONS

Noise Sources

Table 4.12-3 lists the major noise sources in McFarland. The Average Annual Daily Traffic (AADT) count for State Route 99 (SR 99) was obtained from Caltrans' annual report of highway traffic volumes in California, while AADT counts for major local roadways were obtained from the 2016 GPA EIR. 60 dB noise contour distances were obtained from projections performed in the 1991 Noise Element for SR 99 and the railroad, and from the 2016 GPA EIR for the major local roadways.

TYPE	SOURCE		AADT	APPROXIMATE DISTANCE FROM CENTER TO 60 DB NOISE CONTOUR, IN FEET
MOBILE	**State Route 99 (SR 99) (Sherwood Ave to Elmo Hwy)**		61,000	2,045
	Union Pacific Railroad (UPRR)		N/A	700
	Sherwood Ave	West of SR 99/1st St.	4,800	41
		SR 99 to Browning Rd	4,600	39
		Browning Rd to Bowman Rd	3,612	31
	1st Street	Sherwood Ave to SR 99	4,200	36
		North of Sherwood Ave	2,800	24
	Whisler Road (Mast Ave to SR 99)		2,275	20
STATIONARY	**Paramount Citrus Packing Plant (Southeast of Sherwood Ave and SR 99)**		N/A	630
	McFarland Dairy (Southeast of Taylor Ave and SR 99)		N/A	Unknown

Sources: 1991 Noise Element, 2016 GPA EIR, Caltrans 2017 Traffic Census

Mobile Noise Sources

Mobile noise sources include vehicular traffic, aircraft, and railroads. The primary source of mobile noise in McFarland is SR 99, followed by the railroad. SR 99 is a divided highway with three lanes going in each direction. In 2017, the AADT according to Caltrans was about 61,000. Much of the traffic on SR 99 through McFarland consists of heavy trucks moving cargo around Kern County.

A small number of major local roads have 60 dB noise contours of 20 feet or more. Most, if not all these roads have a 60 dB noise contour that envelopes only the parcels directly adjacent or nearly adjacent to the roads. The maximum 60 dB contour distance of the major local roadways is 41 feet from the center line of Sherwood Ave, west of SR 99/1st St. It should be noted that Sherwood Ave is 30 feet wide from centerline to the edge of the sidewalk on each side.

The railroad is a significant source of intermittent noise, but its 60 dB contour is entirely contained within the SR 99 60 dB contour.

There are no aircraft operations in the City of McFarland. The closest airport is the Delano Municipal Airport, just over four miles to the south. The 60 dB noise contours calculated for this airport do not extend to McFarland, nor to its planned expansion area to the south.

Stationary Noise Sources

Stationary noise sources include construction activities as well as commercial and industrial uses. The major stationary noise source in the City is the McFarland Dairy to the southeast of Taylor Ave at SR 99. The 60- and 65-dB noise contours of the dairy are not known.

Noise Contour Map

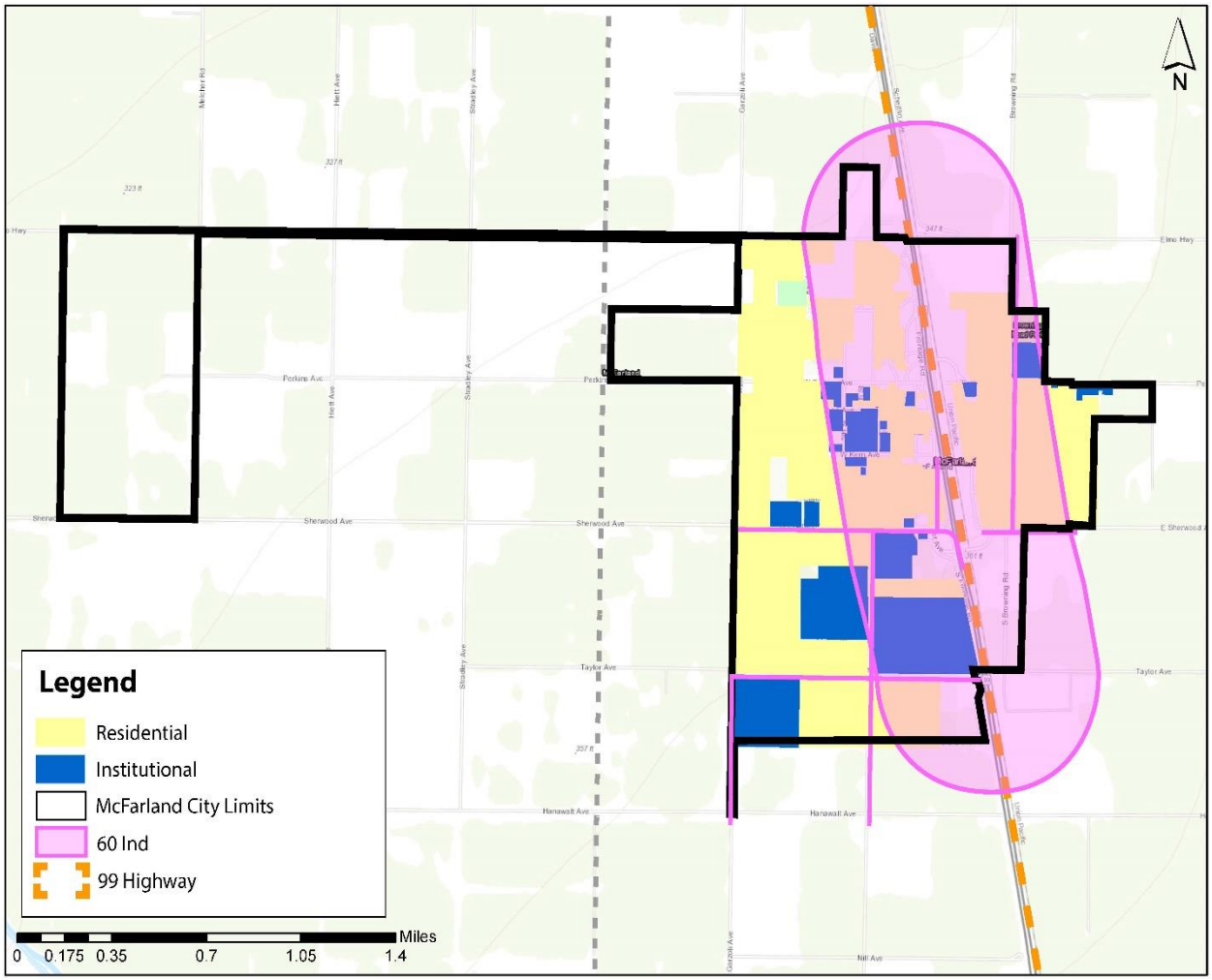
Map 4.12-1 shows the 60 dB noise contours within McFarland for SR 99, the railroad, the citrus packing plant, and major local roadway sources. It also shows sensitive land uses, including residential which is colored a light green, as well as churches, schools, and hospitals and long-term healthcare facilities, all colored blue. Map 4.12-2 is the same, but with the 65 dB noise contour instead of the 60 dB contour. Noise sensitive land uses in the City are listed below:

- Churches
    - St. Elizabeth Catholic Church
    - First Missionary Baptist Church
    - Restoration Rock Church
    - Iglesia Ni Cristo
    - Church of the Living Savior
    - Sherwood Avenue Baptist Church
    - Gospel Lighthouse United
    - El Buen Pastor Church Assembly
- Schools
    - Browning Road STEAM Academy
    - Kern Avenue Elementary School o Horizon Elementary School

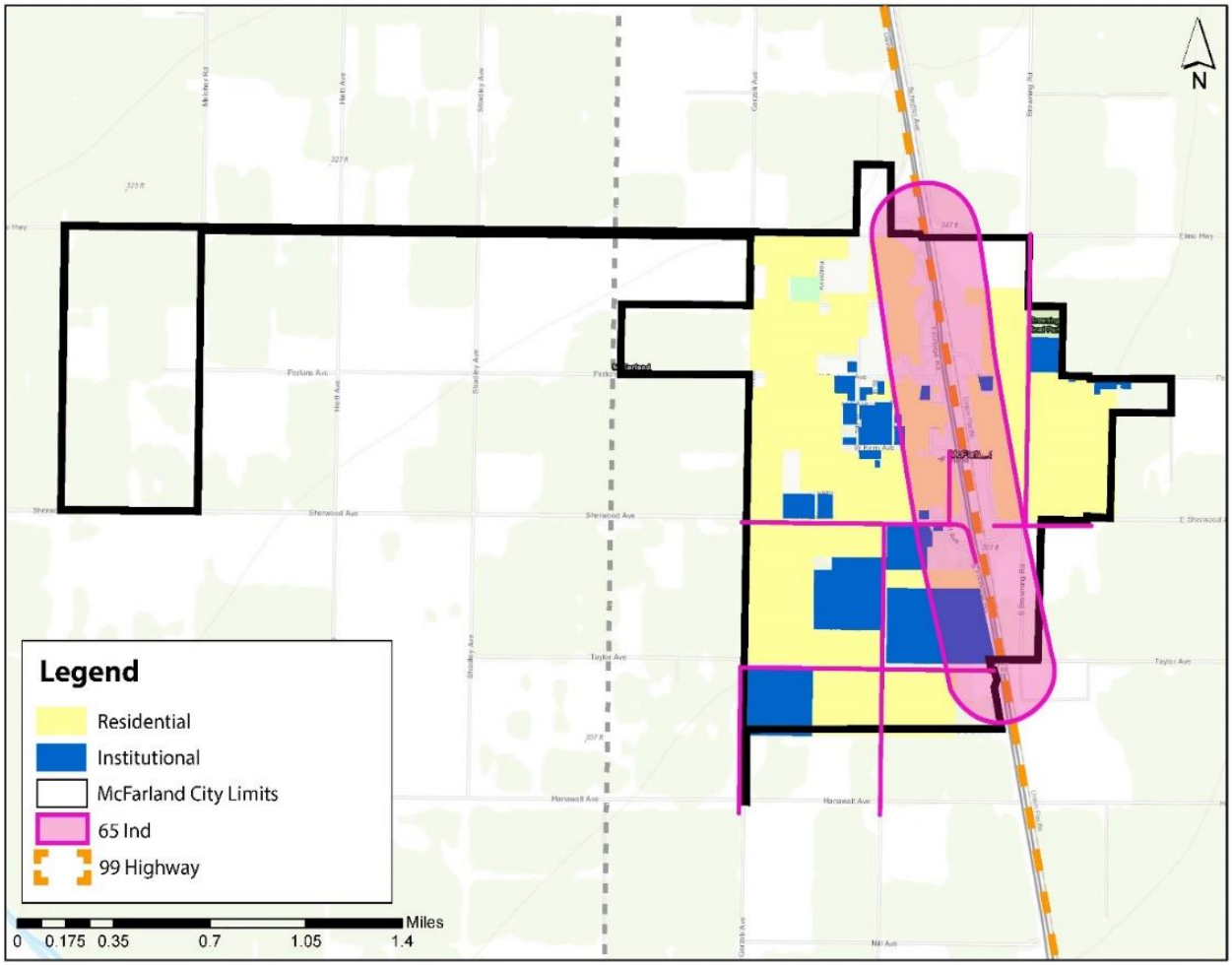
- McFarland Jr High School
- McFarland High School
- San Joaquin High School

- Hospitals and long-term healthcare facilities
  - None in the City, only a small medical clinic

MAP 4.12-1: 60 DB NOISE CONTOUR AND SENSITIVE RECEPTORS IN MCFARLAND



MAP 4.12-2: 65 DB NOISE CONTOUR AND SENSITIVE RECEPTORS IN MCFARLAND



4.12.2 STANDARDS OF SIGNIFICANCE

4.12.2.1 CEQA THRESHOLDS

Noise-related impacts are considered significant if the proposed Plan has the potential to cause:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

4.12.2.2 METHODOLOGY

The impact discussion works within the framework stated above in order to determine the level of significance pertaining to the proposed Plan. The analytical approaches used in preparing the impact discussion are as follows:

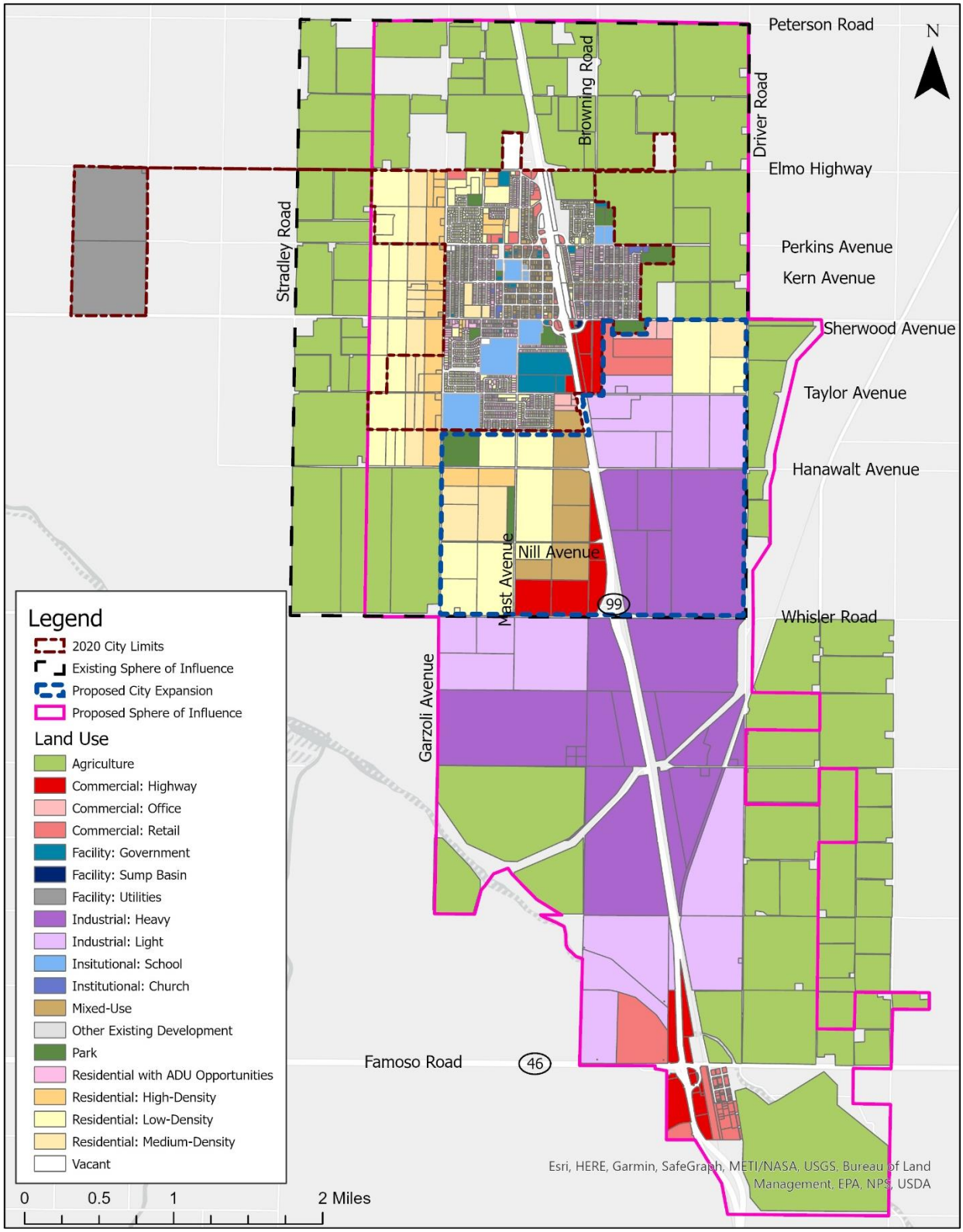
- Identify relevant noise policies, standards, and regulations.
- Identify and map major noise sources and sensitive receptors (e.g., residences, areas used for quiet recreation) in the proposed project area.
- Estimate noise associated with project construction activities. Determine the duration of construction and phases or periods most likely to be disruptive. Identify other nearby projects potentially undergoing simultaneous construction. Compare effects with land use compatibility standards, and applicable noise standards.
- Identify noise sources related to project operation (e.g., new traffic, stationary equipment, or other loud activities), and estimate noise that may result from build-out of the Plan.

4.12.3 IMPACT DISCUSSION

NOISE – 1 THE PROPOSED PLAN WILL RESULT IN LESS-THAN-SIGNIFICANT GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

To accommodate future growth, the Plan proposes a conversion of vacant land to residential, commercial, industrial, agricultural, open space, and public facility uses. Map 4.12-3 illustrates land uses of the proposed Plan. Referencing the noise contours illustrated in Map 4.12-1, noise-sensitive land uses, including open space, public facilities, and residential land uses are proposed outside of normally or clearly acceptable ranges of noise established in Table 4.12-2. Furthermore, the proposed land uses do not expose existing sensitive receptors to an unacceptable range of noise. However, with growth in population and activities, there is a chance that noise levels would increase. Therefore, the proposed Plan could cause less-than-significant generation of noise levels in excess of the established standards. Additionally, subsequent projects under the Plan are to undergo CEQA review and mitigation of noise impacts. The proposed Plan therefore includes the following policies and programs to maintain acceptable levels of noise.

MAP 4.12-3: GENERAL PLAN LAND USES



Policy LU 3.1.1: Reduce conflicts between incompatible land uses.

Program LU 3.1.1.1: Establish mandatory distances between land uses to conform with the standards for complementary uses, such as parks, active commercial areas, public facilities, and housing.

Program LU 3.1.1.2: Introduce transitional uses or spaces between conflicting uses (e.g., multifamily between single family and commercial, park/open space areas).

Program LU 3.1.1.3: Establish requirements for landscaping, buffering, screening, air quality, noise, odor, light, and traffic.

Policy NOI 1.1.1: All new residential, school, church, or healthcare facility development within the 60 dBA Ldn contours must include a noise analysis and noise mitigation measures to minimize exposure.

Program NOI 1.1.1.1: Develop an example noise analysis emphasizing the required contents for use by developers, as well as a list of recommended mitigation measures.

Policy NOI 1.2.1: Avoid permitting of new residential, school, church, or healthcare facility development within the 65 dBA Ldn contours.

Policy NOI 2.1.1: New noise-generating development that could cause an existing noise-sensitive receptor(s) to be exposed to a noise level of 60 dBA Ldn or greater must include mitigation measures specifically designed to minimize noise exposure to the sensitive receptor(s).

Policy NOI 3.1.1: New equipment and vehicles purchased, rented, or otherwise used by the City of McFarland must use the best available technology to minimize noise generation.

Program NOI 3.1.1.1: When replacing or doing major repairs to existing City equipment or vehicles, the equipment or vehicle must also be outfitted with the best available noise mitigating technology, such as improved mufflers and tires.

Policy NOI 3.2.1: All new development in the 60 dBA Ldn contours must include a noise analysis and explain architectural, construction, and building massing techniques used to mitigate noise generation.

Program NOI 3.2.1.1: Prepare a list of recommended architectural, construction, and building massing techniques to mitigate noise generation for use by developers.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

NOISE – 2 THE PROPOSED PLAN WILL RESULT IN LESS-THAN-SIGNIFICANT EXPOSURE OF PERSONS TO OR GENERATION OF EXCESSIVE GROUND-BORNE VIBRATION OR GROUND -BORNE NOISE LEVELS.

Ground-borne vibration and noise levels in McFarland are primarily associated with vehicular traffic along SR 99. The railroad is also a significant source of intermittent noise, but its 60 dB contour is entirely contained within the SR 99 60 dB contour. The proposed Plan prioritizes industrial and commercial development along SR 99 and within the 60 dB contour. Sensitive land uses are located outside of the unacceptable noise ranges established in Table 4.12-2. However, increased activity under the Plan could generate additional movement of heavy vehicles that could impact ground vibration. Nevertheless, the proposed Plan would less than significantly expose people to, or generate, excessive ground-borne vibration or ground-borne noise levels. Furthermore, subsequent projects under the Plan are to undergo CEQA review and mitigation of noise impacts. In addition, the following policies and programs are to help reduce ground-borne noise.

Policy NOI 2.2.1: Actively seek funding sources, including grants, subsidies, donations, and other sources, for the planning, design, and construction of noise barriers along Highway 99 and the railroad.

Program NOI 2.2.1.1: Prepare a study to determine the best location(s) for noise barriers along Highway 99 and the railroad.

Program NOI 2.2.1.2: Research and implement an impact fee program for new noise-generating development to create a fund for the development of noise barriers along Highway 99 and the railroad.

Policy NOI 4.1.1: Reserve undeveloped noise-impacted areas primarily for compatible commercial and industrial development.

Program NOI 4.1.1.1: Demarcate areas along Highway 99 for commercial and industrial activities with the highest noise tolerance and generation.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

NOISE – 3 THE PROPOSED PLAN WILL NOT RESULT IN EXPOSURE OF PERSONS RESIDING OR WORKING IN THE PLANNING AREA TO EXCESSIVE NOISE LEVELS ASSOCIATED WITH 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.

There are no aircraft operations, including private airstrip, public airport, or public use airport in the City of McFarland. The closest airport is the Delano Municipal Airport, just over four miles to the north. The 60 dB noise contours calculated for this airport do not extend to McFarland, nor to its planned expansion area to the south. Therefore, no persons residing or working in the Planning Area would be exposed to excessive noise levels associated with a private airstrip, public airport, or public use airport.

Applicable Regulations: None

Significance Before Mitigation: No impact

4.12.4 Summary of Potential Impacts and Mitigation Measures

There are no potentially significant impacts associated with noise, and thus no mitigation measures are required.

4.12.5 References

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4.13 Population and Housing

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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)?			X	
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

4.13.1 Environmental Setting

This section discusses the environmental setting regarding housing the City of McFarland.

4.13.1.1 Regulatory Framework

The Regulatory Framework section provides information on the current federal, state, and local regulatory standards and programs pertaining to population and housing in the proposed Plan.

Federal Regulations

Housing and Urban Development

The U.S. Department of Housing and Urban Development (HUD) was established to provide quality affordable housing for people across the nation. The agency oversees national policies and programs that enforce fair housing laws and address the people's housing needs. The following sections detail federal standards established by HUD with regard to housing.

State Regulations

Sustainable Communities and Climate Protection Act of 2008 (SB 375)

State law requires housing elements to be updated every five years to accommodate its entire RHNA share by income category. In 2008, SB 375 extended the update period to eight years to better synchronize with the development of the Regional Transportation Plan with the RHNA and Housing Element update process. If local governments fail to update its Housing Element within the eight-year deadline, it will be placed into a shorter four-year deadline by the HCD. Once the local government successfully certifies two Housing Elements in the four-year cycle, it is then eligible to return to an eight-year cycle.

State Of California General Plan Guidelines 2003

The Governor's Office of Planning and Research provides the State of California General Plan Guidelines 2003 (GPG) document as a comprehensive guide for local governments to prepare general plan documents. The GPG notes that state law requires the housing element of general plans to be updated at a frequency of "not less than once every five years (§65588)" (OPR, 2003, p. 62). The process of updating the housing element requires a quantitative analysis of the existing housing inventory, existing needs, and projected future needs (provided by the Regional Housing Needs Assessment), as well as the establishment of programs to provide for those needs with respect to identified constraints. State law also requires quantified objectives by income level to be made "for the construction, rehabilitation, and conservation of housing (§65583(b))" (OPR, 2003, p. 62).

Regional Housing Needs Assessment (RHNA)

The California Department of Housing and Community Development (HCD) is required by state law to allocate statewide housing needs to each region through the RHNA process. HCD (2016) works in collaboration with regional Councils of Government and counties to allocate shares of housing needs to each region "based on California Department of Finance population projections and regional population forecasts used in preparing regional transportation plans." The following objectives should be attained in a RHNA plan:

- Increase the housing supply and the mix of housing types, tenure and affordability in all cities and counties within the region in an equitable manner;
- Promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns; and
- Promote an improved intraregional relationship between job and housing (HCD, 2016b).

Local Regulations

City of McFarland Housing Element

The City of McFarland Housing Element provides a roadmap for how the jurisdiction will accommodate housing needs for the next five years upon the date of adoption. As required by state law, the Housing Element must quantify projected housing needs by income level, review the existing housing inventory

and constraints to housing, and demonstrate how the City of McFarland will accommodate housing needs by establishing appropriate goals, policies, objectives, and implementation measures.

City of McFarland Zoning Code

The zoning code for the City of McFarland specifies the physical requirements of developments in regard to the designated land use of the area that it is built in. As the General Plan, which contains the Housing Element and Land Use Element, serves as the "constitution for future development" under California law, the zoning code must adhere to what is established in the General Plan. A change in the zoning code must not be out of compliance with what is designated in the General Plan.

4.13.1.2 Existing and baseline Conditions

The most aggressive target for population growth in McFarland is 33,220 by the year 2040. Based on this projection, the City would need additional 7,550 housing units by 2040 to accommodate the growth in population. Half of the new housing needs to be affordable. During the planning process, community feedback indicated an interest in maintaining affordability within the City's housing stock, increasing mixed-use residential development downtown, and developing an increased variety of housing options for residents.

Population

The City of McFarland has been a steadily growing community over the past two decades. As shown in Table 4.13-1, the populations of McFarland and Kern County in 2010 were 12,707 and 839,631, respectively. By 2019, the populations of McFarland and Kern County had grown to 15,242 and 916,464, respectively. From 2010 to 2019, McFarland's population grew by 20%, faster than Kern County's population change of 9% during the same period.

Table 4.13-1: Population Growth, 2010 to 2019

JURISDICTION	2010 POPULATION	2019 POPULATION	CHANGE, 2010-2019	
			Number	Percent
McFarland	12,707	15,242	2,535	20
Kern County	839,631	916,464	76,833	9
California	37,253,956	39,927,315	2,673,359	7

Source: California Department of Finance; 2019 Estimates, Table E-5

McFarland's population is projected to grow from 13,020 in 2015 to 23,690 by 2040 under baseline conditions. However, the Preferred Growth attempts to accommodate the most aggressive plausible growth to 33,220 people. The age distribution is projected to change as birth rates decline and the average age of the population increases.

Housing

Table 4.13-2 shows the housing unit type composition of McFarland. Most housing units in the City were single-family detached units as of 2017, making up about 86% of all housing units. The next largest unit type category of multi-family of two to four units consisted of 7% of all housing units. Mobile homes made up 2% of all housing units.

TABLE 4.13-2: HOUSING UNITS BY TYPE, 2019

TYPE	NUMBER	PERCENT
Single-Family Detached	2,634	86%
Single-Family Attached	57	2%
Multi-Family (2-4 units)	208	7%
Multi-Family (5+ units)	98	3%
Mobile Homes, Other	70	2%
Total	3,067	100%
Source: California Department of Finance; 2019 Estimates, Table E-5		

As seen in Table 4.13-3, 64 housing units were vacant in McFarland in 2017, making up about 2% of the total housing stock. This was much lower than the Kern County and California average vacancy rates for 2017 of 10% and 8% respectively. It is common practice to assume that a healthy housing market has a vacancy rate of approximately 7 to 8%.

TABLE 4.13-3: OCCUPANCY STATUS, 2017

	2010		**2017**		PERCENT CHANGE
	Number	Percent	Number	Percent	
Occupied	2,599	97%	3,022	98%	16%
Vacant	84	3%	64	2%	-24%
Total	2,683	100%	3,086	100%	15%
Source: U.S. Census Bureau; 2017 American Community Survey Table B25002 5-Year Estimates					

Approximately 39% of McFarland's existing housing units were built before 1980. There has been consistent new construction of homes from 1970 to the present. Table 4.13-4 shows the distribution of housing units by year built in McFarland.

TABLE 4.13-4: AGE OF HOUSING STOCK, 2017

YEAR BUILT	NUMBER	PERCENT
2010 or later	292	9%
2000 - 2009	694	22%
1990 - 1999	427	14%
1980 - 1989	508	16%
1970 – 1979	536	17%
1960 – 1969	137	4%
1950 – 1959	154	5%
1940 – 1949	250	8%
Before 1939	88	3%
Total Housing Units	3,086	100%

Source: U.S. Census Bureau; 2017 American Community Survey Table B25034 5-Year Estimates

According to the land use inventory conducted in October 2019, about 73% of the housing stock in McFarland is in good condition, and about 24% is in fair condition. Only 2% of the housing stock is in poor condition. Table 4.13-5 shows the distribution of the conditions of the housing stock of McFarland in 2019.

TABLE 4.13-5: HOUSING STOCK CONDITIONS, 2019

STRUCTURE CONDITION	NUMBER	PERCENT
Good	2,262	73%
Fair	754	24%
Poor	70	2%
Total Units	3,086	100%

Source: Cal Poly MCRP Studio Land Use Inventory, 2019

Housing tenure refers to the financial arrangement by which a household obtains housing, with most households being either homeowners or renters. Table 4.13-6 shows McFarland's housing tenure for 2017. According to the American Community Survey (ACS) 5-year estimates for 2017, about 58% of McFarland's 3,022 housing units were owner occupied in 2017, with 42% being renter occupied. These percentages are almost identical to the housing tenure breakdown for 2010.

TABLE 4.13-6: HOUSING TENURE, 2010-2017

TENURE	2010		2017		PERCENT CHANGE
	Number	Percent	Number	Percent	
Owner Occupied	1,488	57%	1,749	58%	18%
Renter Occupied	1,111	43%	1,273	42%	15%
Total	2,599	100%	3,022	100%	16%
Source: U.S. Census Bureau; 2017 American Community Survey Table B25003 5-Year Estimates					

Employment

According to OnTheMap data from the U.S. Census, 3,875 workers live in McFarland. Of these, 17% work in McFarland. The majority, 83%, work outside of McFarland, as shown in Figure 4.13-1. In contrast, 6,743 people work in McFarland. As shown in Figure 4.13-2, 90% of McFarland's workforce lives outside of the City. Therefore, McFarland's jobs do not match residents' employment. McFarland does not harness or benefit from residents' economic productivity because they are employed elsewhere.

The employment–housing balance helps to gauge the economic health of an area. As shown in Figure 4.13-3, using 2017 Census data, California averages 1.4 workers per housing unit. Kern County averages just less than California at 1.3 workers per housing unit, while McFarland averages more at 1.7 workers per housing unit. This indicates that more McFarland workers live together than is typical for the region. While this could occur because of a cultural difference, it could also indicate that low incomes cause more workers to live together than otherwise would.

Figure 4.13-3 also shows that there are relatively more jobs in McFarland than is typical for housing the City possesses. Coupled with the higher unemployment rate of 14.2%, this may indicate that many of the local jobs are part-time or seasonal.

FIGURE 4.13-1: PLACE OF EMPLOYMENT FOR WORKERS WHO LIVE IN MCFARLAND

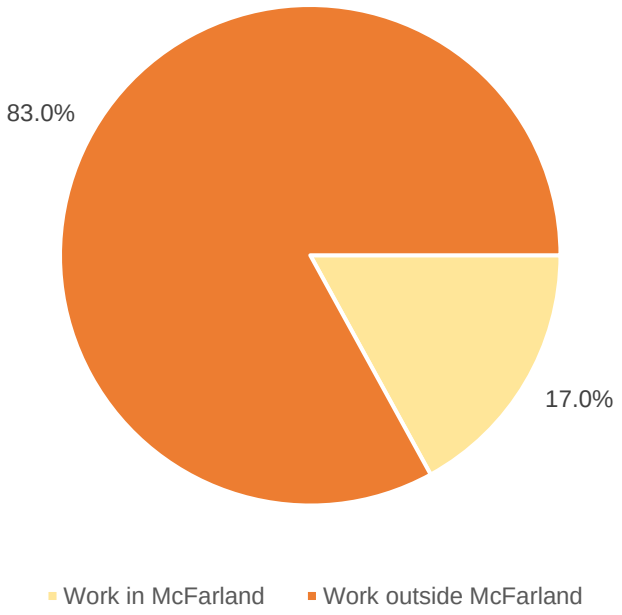


FIGURE 4.13-2: PLACE OF RESIDENCE FOR THOSE WORKING IN MCFARLAND

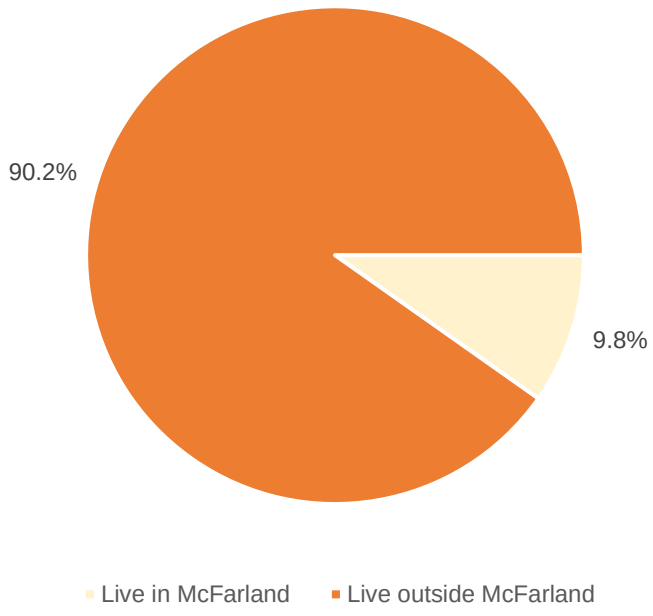
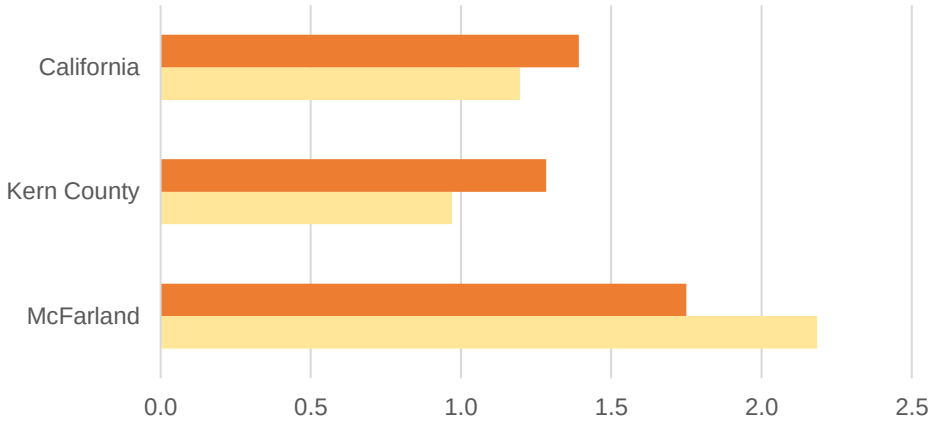


FIGURE 4.13-3: WORKFORCE AND JOBS COMPARED TO HOUSING UNITS



	McFarland	Kern County	California
Workforce in area / Housing units in area	1.7	1.3	1.4
Jobs in area / Housing units in area	2.2	1.0	1.2

Unemployment involves a person actively seeking employment who is unable to find work. The unemployment rate in McFarland, 14.2%, is much higher than Kern County's unemployment rate of 7.7%. The high unemployment rate indicates that McFarland possesses excess workforce that could contribute to the City's economy.

The high unemployment and workers per resident rates are indicators of low incomes. The median household in McFarland earns $35,069 in 2017. In contrast, a median household in Kern County earns $50,826 and a median household in California earns $67,169. The median household in McFarland earns about 70% of median households in Kern County and about 52% of median households in California. This shows the need for higher wage and long-term employment in the City of McFarland and that McFarland is considered a disadvantaged community.

4.13.2 STANDARDS OF SIGNIFICANCE

4.13.2.1 CEQA THRESHOLDS

In accordance with Appendix G of the CEQA Guidelines, the following criteria serve as the standards of significance for any potential environmental impacts resulting from population and housing in the proposed Plan:

1. 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);

2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.13.2.2 METHODOLOGY

The methodology for evaluating the proposed Plan's impacts involves a review of its estimates of future population and housing growth. The proposed Plan's goals, policies, and programs are also reviewed to determine if future population and housing growth is accommodated in a responsible, efficient, and compatible manner with the thresholds identified in the CEQA Guidelines.

4.13.3 IMPACT DISCUSSION

POP – 1 THE PROPOSED PLAN WOULD RESULT IN **LESS-THAN-SIGNIFICANT** IMPACT IN INDUCING 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).

The proposed Plan used the cohort-component method of population projection according to State of California guidelines to calculate population growth and number of households. Under the Plan, the City of McFarland could need to accommodate up to about 4,500 additional housing units by 2040. This is to meet the needs of a population increase and the target for jobs by 2040 under the Plan.

The proposed Plan would accommodate the additional housing units through a combination of infill development in the five targeted key growth areas that Map 4.13-1 shows and increases in the density of development.

The Plan is to also expand the existing road network to serve the new developments in the key growth areas. This expansion in roads would support planned population growth, and therefore not result in significant impacts.

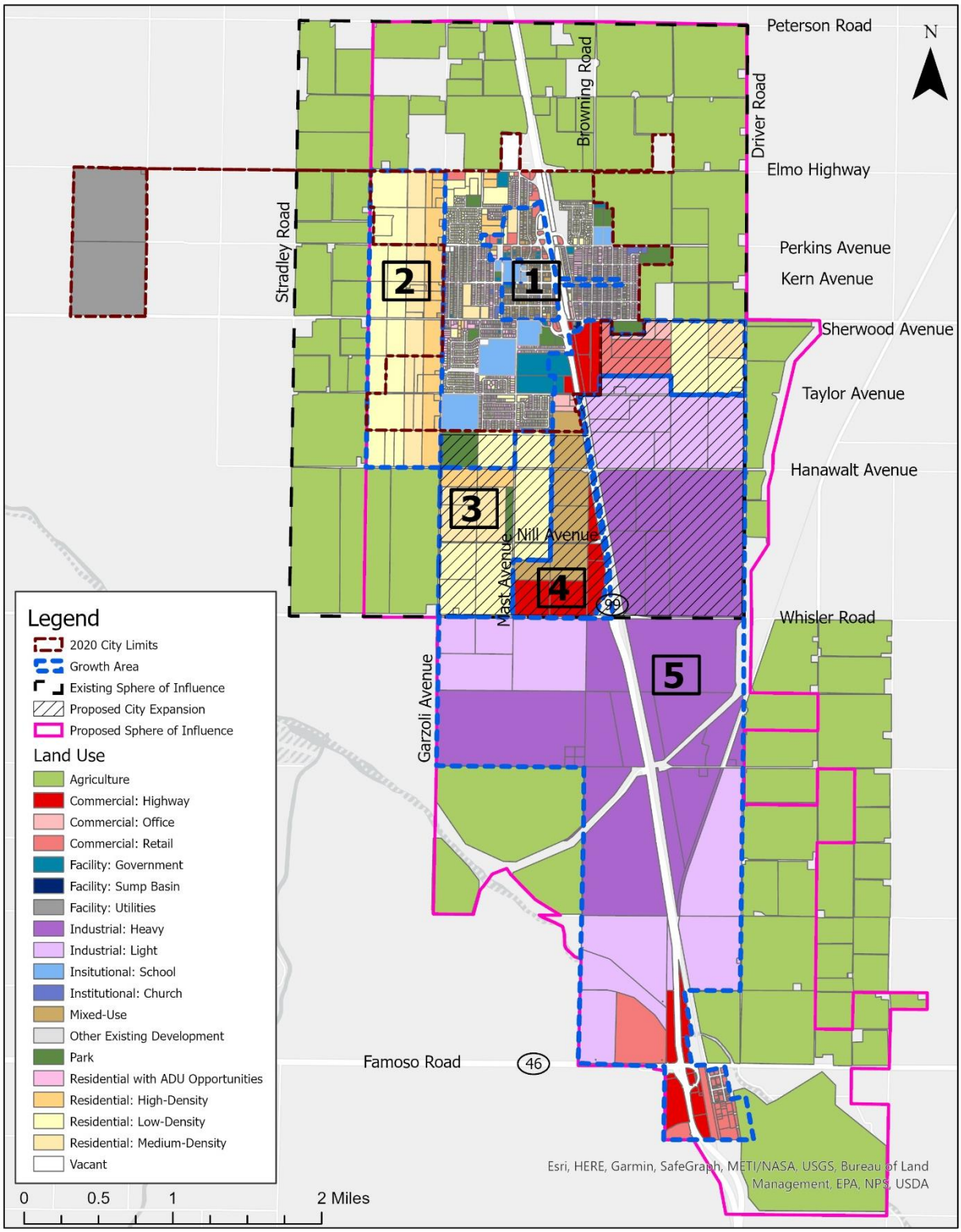
The impacts that the Plan could generate from population growth in relation to expansion in the supply of housing and roadways are mitigated, however, with policies outlined under the proposed Plan. Therefore, the proposed Plan would result in a less-than-significant impact. The policies are as follows:

Policy LU 1.1.1: Expand the range of allowable housing types and areas in which they may be built.

Program LU 1.1.1.1: Allow increased density near the downtown core and commercial centers.

Program LU 1.1.1.2: Create inclusionary zoning for new construction to include a portion of affordable units.

MAP 4.13-1: GENERAL PLAN LAND USE MAP



Program LU 1.1.1.3: Remove regulatory obstacles that have the effect of rendering various housing types uneconomical, such as unnecessary onerous parking per residential unit.

Program LU 1.1.1.4: Allow and facilitate accessory dwelling units (ADUs).

Policy LU 1.2.1: Pursue regulatory and investment strategies that promote a healthy mix of uses (e.g., retail, residential, office, and public facilities) in the downtown core.

Program LU 1.2.1.1: Establish residential-commercial mixed uses downtown.
Program LU 1.2.1.2: Provide standards for mixed-use development in the downtown core.
Program LU 1.2.1.3: Reduce parking requirements for new mixed-use commercial and residential development in the downtown core.

Policy LU 1.2.2: Pursue regulatory and investment strategies that change the mix of uses over time in areas identified as future development sites.

Program LU 1.2.2.1: Establish strategic mixed-use nodes of commercial and office uses to serve nearby neighborhoods along Garzoli Avenue at Perkins, Sherwood, and Taylor Avenues and along East Kern Avenue.

Policy LU 2.2.1: Accommodate automotive and non-motorized vehicle users safely.

Program LU 2.2.1.1: Adopt guidelines for mixed-use, high intensity nodes.
Program LU 2.2.1.2: Increase density around transit stops.
Program LU 2.2.1.3: Situate parking to enhance the pedestrian environment and facilitate access between destinations.
Program LU 2.2.1.4: Use trees and other green infrastructure to provide shelter, beauty, urban heat reduction, and separation from automobile traffic.

Policy CIR 1.1.1: Connect sidewalks and other pedestrian infrastructure.

Program CIR 1.1.1.1: Identify and prioritize gaps in the pedestrian network for infrastructure improvements.

Policy CIR 1.2.1: Connect all bicycle infrastructure.

Program CIR 1.2.1.1: Establish separated bike lanes on Garzoli Avenue, Mast Avenue, Sherwood Avenue, Kern Avenue, and Browning Road to connect McFarland's southern neighborhoods with its downtown, eastern, and northern neighborhoods.

Policy CIR 2.1.1: Improve connections between local and regional transit routes.

Policy CIR 4.1.1: Expand the bus pass program.

Policy CIR 4.1.2: Increase existing service area coverage.

Policy HO 1.3.1: Accommodate the City's housing need over the life of the General Plan.

Program HO 1.3.1.1: Expand housing to the west of the City away from floodable areas.

Program HO 1.3.1.2: Establish mixed-use development options in the downtown, along Kern Avenue on the east side, and south of the City, off Highway 99.

Policy HO 1.3.2: Establish modified procedures to streamline permit processing.

Program HO 1.3.2.1: Develop brochures for community residents that give information about various permit processes.

Policy HO 3.1.1: Increase affordable housing production.

Program HO 3.1.1.1: Create and maintain an up-to-date inventory of vacant and underutilized parcels.

Program HO 3.1.1.2: Provide information to interested developers on affordable housing opportunities.

Program HO 3.1.1.2: Partner with affordable housing developers to assist in development on infill sites of housing for lower and moderate-income households.

Policy HO 3.1.2: Reduce governmental constraints to housing production.

Policy HO 3.2.1: Accommodate affordable housing need over the life of the General Plan.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

POP – 2 THE PROPOSED PLAN WOULD RESULT IN A LESS-THAN-SIGNIFICANT IMPACT REGARDING DISPLACING SUBSTANTIAL NUMBERS OF EXISTING PEOPLE OR HOUSING, NECESSITATING THE CONSTRUCTION OF REPLACEMENT HOUSING ELSEWHERE.

Population growth under the proposed Plan would require additional 4,500 housing units. This housing need can be met through the reoccupation of existing vacant units, redevelopment of existing units in "bad" condition, and developing new units. This Plan does not necessitate the displacement of existing housing units, but rather encourages the conservation and improvement of the existing housing stock as well as constructing new units. However, redeveloping units in less than desirable conditions could displace some occupants even if temporarily. Policies in the Plan are to help assure that there would be no substantial displacement of people or existing housing units that would necessitate the construction of replacement housing elsewhere. Plan policies and programs are the following:

Policy HO 1.1.1: Preserve existing housing stock, including affordable housing stock, through City regulations and other forms of assistance.

Program HO 1.1.1.1: Continue the Housing Code Enforcement Program.

Program HO 1.1.1.2: Adopt Sustainable Design Guidelines, which give guidance on sustainable design principles such as sustainable energy usage, water conservation, and utilization of reusable building materials.

Program HO 1.1.1.3: Develop brochures for community residents with information about home maintenance.

Policy HO 1.2.1: Expand financial assistance for residents in-need to be used for home rehabilitation.

Program HO 1.2.1.1: Continue the City's Home Rehabilitation Program by providing loans to low-income homeowners funded by grants such as the Community Development Block Grant (CDBG).

Program HO 1.2.1.2: Seek additional funding sources for the City's Home Rehabilitation Program.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

4.13.4 Summary of Potential Impacts and Mitigation Measures

Buildout of the proposed Plan would not result in significant impacts related to population and housing. No mitigation measures are, therefore, required.

4.13.5 References

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Counties, and the State: McFarland, California. Table E-5; Retrieved October 11, 2019 from http://www.dof.ca.gov/Forecasting/Demographics/

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County, and California; American Community Survey 5 Year Estimates, Table B02001; Retrieved October 11, 2019 from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

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U.S. Census Bureau; 2017 Census of Population and Housing, Employment Status; McFarland & Kern County, California; American Community Survey 5 Year Estimates, Table S2301; Retrieved October 11, 2019 from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

U.S. Census Bureau; 2017 Census of Population and Housing, Income in the past 12 Months (In 2017 Inflation-Adjusted Dollars); McFarland & Kern County, California; American Community Survey 5 Year Estimates, Table S1901; Retrieved October 11, 2019 from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

U.S. Census Bureau; 2017 Census of Population and Housing, Language Spoken at Home (In 2017 Inflation-Adjusted Dollars); McFarland & Kern County, California; American Community Survey 5 Year Estimates, Table S1601; Retrieved November 4, 2019 from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

U.S. Census Bureau; 2017 Census of Population and Housing, Poverty Status in the Past 12 Months; McFarland & Kern County, California; American Community Survey 5 Year Estimates, Table S1701; Retrieved November 4, 2019 from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

U.S. Census Bureau; 2017 Census of Population and Housing, Selected Economic Characteristics; McFarland & Kern County, California; American Community Survey 5 Year Estimates, Table DP03; Retrieved October 11, 2019 from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

4.14 Public Services

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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 the following:				
1. Fire protection?			X	
2. Police protection?			X	
3. Schools?		X		
4. Parks?			X	
5. Other public facilities?		X		

This section explains the public services provided by the City of McFarland and the existing public facilities in the City. It also evaluates the potential impacts of the proposed Plan on the delivery of these services. The public services and facilities addressed include the following: Police Services, Fire Protection and Emergency Services, Public Schools, Parks and Library Services. Each section summarizes the existing and appropriate regulatory framework, existing environmental conditions and discusses the specific and cumulative impacts of the Plan.

The proposed Plan will likely lead to changes in development, potentially impacting the level of service delivery and use of public services and facilities. This analysis identifies possible impacts the build-out and future development related to the Plan may have on public services and facilities. Additionally, this analysis determines if they should be considered significant impacts.

4.14.1 Fire Protection

4.14.1.1 Environmental Setting

This section examines the existing conditions of fire protection and emergency services and the potential impacts of buildout in the proposed Plan. This includes building and fire codes as well as risk from wildland fires.

Regulatory Framework

Federal Regulations

There are no applicable federal regulations for Fire Protection and Emergency services.

State Regulations

California Fire Code, Title 21, Part 9

The California Fire Code contains regulations regarding many aspects of wildfire and urban fire safety. This code specifies roadway and driveway design, access, building identification, water, and vegetation modification standards as well as defensible space requirements**.**

California Fire Code, Title 24, Part 9, California Code Of Regulations

The California Fire Code is Part 9 of the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. The California Fire Code incorporates the Uniform Fire Code with necessary California amendments. This Code prescribes regulations consistent with nationally recognized practices for the safeguarding, to a reasonable degree, of life and property from the hazards of fire explosion, dangerous conditions arising from the storage, handling, and use of hazardous materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises, and provisions to assist emergency response personnel.

California Health And Safety Code

State fire regulations set forth in Section 13000 et seq. of the California Health and Safety Code include regulations for building standards (as 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.

California Fire Code: Part 9 Of Title 24 Of The California Code Of Regulations

The California Fire Code sets standards for fire protection including provisions for the following: planning, preparedness, appropriately rated construction, emergency access, protection systems, and hazardous materials.

Fire Prevention Fee Assembly Bill X1 29 (Ab X1 29)

Lands where the State of California has financial responsibility for wildfire protection (lands which are not in incorporated cities or held under Federal jurisdiction) are considered State Responsibility Areas (SRAs). AB X1 29 establishes a fee on each structure in an SRA to support the suppression of fire in these areas. Fees are assessed and adjusted annually.

Wildland-Urban Interface Fire Area Building Standards

As of 2008, new buildings in "any Fire Hazard Severity Zone within State Responsibility Areas (SRA), any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted" (Cal Fire, 2016) must comply with the updated Wildland-Urban interface building standards code. This code mandates fire resistance through fuel reductions, defensible space, and fire-resistant building materials.

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California Occupational Safety Health And Administration (Cal Osha)--Part 9 Of Title 24 Of The California Code Of Regulations

The California Division of Occupational Safety and Health (Cal OSHA), in compliance with Title 8 Sections 1270 and 6773 of the California Code of Regulations, sets minimum standards for emergency medical services (EMS) and fire services. These standards cover the use of potential hazardous equipment that emergency workers interact with when carrying out emergency services such as use of compressed air tanks, fire hoses, and access routes.

California Emergency Medical Services Authority

The California Emergency Medical Services Authority is responsible for paramedic licensure, emergency medical technician regulation, trauma center and system standards, ambulance service coordination, and disaster medical response. Additionally, it is responsible for managing the State of California's medical response in the event of major disasters.

California Office Of Emergency Services (Cal OES) State Of California Emergency Plan 2015

The California Office of Emergency Services (Cal OES) developed the State of California Emergency Plan to provide a state strategy to support local jurisdictions in the case of a large-scale emergency, in compliance with the California Emergency Services Act and directs fire and rescue equipment and operation guidelines.

California Public Resources Code: Division 4. Forest, Forestry And Range And Forage Lands

The California Resources Code calls for the delineation of state responsibility areas (SRAs) to separate state lands and local responsibility areas. These are areas where the State of California is financially responsible for wildland fire protection. Federal land and incorporated cities are not considered SRAs. The Board of Forestry and Fire Protection determines landscapes with high wildfire risk and by cover-type and population as SRAs.

State Of California Office Of Planning And Research

The State of California Office of Planning and Research (OPR) Guidelines recommend that public agencies in fire, flood management, earthquake, and other emergency response agencies coordinate and prepare plans in case of an emergency event. The City of McFarland has developed a Community Resilience Plan for the City and Scope of Influence (SOI).

Local Regulations

Kern County Emergency Operations Plan

The Kern County Emergency Operations Plan establishes an emergency management organization and assigns functions and tasks consistent with the State's Standardized Emergency Management System (SEMS) and the National Incident Management Systems (NIMS). In particular, under the Plan's Annex B-4, Health & Medical Branch, steps, and policies dictate and guide how medical facilities and services are to respond during certain events.

Kern County Fire Standards

The County Municipal Code provides for fire code updates as they occur and adopts the most recent international and national fire codes by reference, including the WUI International Fire Code and other codes such as electrical and construction, all of which affect building resiliency. These are also in effect in McFarland unless specifically indicated otherwise.

McFarland Fire Standards

McFarland Municipal Code Section 15.16.110 accepts and adopts Kern County Universal Fire Code for Safety and Fire Compliance through the Adoption of the Uniform Fire Code by reference. These fire prevention standards, identical to the law covering unincorporated territory in Kern County, satisfy the state and federal standard for code compliance through Title 19 and Title 24, volume 9 of the California Building Code (California Fire Code and California Building Code). The same ordinance also provides for WUI code inclusion and satisfies this requirement by reference. The McFarland Municipal Code ordinance refers to standards from 1991 which are no longer in effect.

Existing and Baseline Conditions

Fire hazard assessment includes the following required components: average weather projections for the year, analysis of potential fuel sources, analysis of historical burn data, federal wildland models, and state models of relative fire danger zones.

McFarland's weather patterns maintain relatively dry conditions year-round. The City receives approximately 7 inches of rainfall per year, with the driest months receiving no rainfall on average. Summer temperatures often average above 90 degrees Fahrenheit (°F), with yearly average temperatures fluctuating between 38 and 99 °F. The 30-year average temperature in McFarland peaks at 98.1 °F during July, making it one of the warmest areas in the state. Yearly wind speed in McFarland averages 5.5 miles per hour (MPH) at 10 meters above the ground with averages during the windiest part of the year reaching

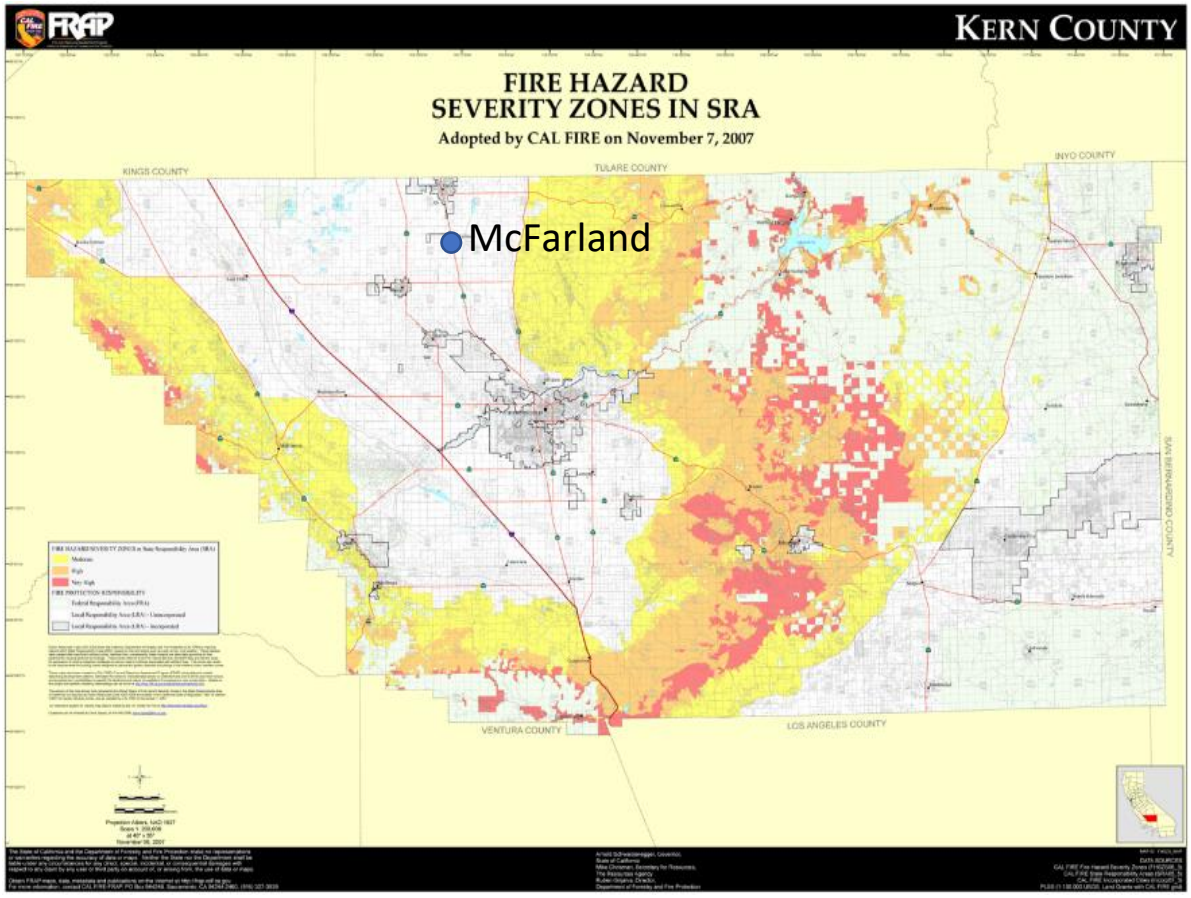
6.7 MPH, in late May. Local wind speeds vary significantly based on tree cover and topography, and these wind conditions could spread sparks and firebrands (ignited pieces of wood) a mile or more from the fire event. Infrequently, high wind events occur in the Central Valley with winds above 70 MPH, increasing relative fire danger during that event. Required historical fire data collected for the area derives from the following tools and resources:

- InciWeb Incident/Hazard Reporting Map *Utility*
- USGS GeoMac Historical Fire Data Viewer
- Monitoring Trends in Burn Severity (MTBS) Interagency *Viewer*

These three databases hold the legally required data and satisfy the requirements for fire hazard readiness.

Map 4.14-1 shows Fire Hazard Severity Zones in State Responsibility Areas in Kern County, utilizing land coverage and weather data from MODIS satellite imaging and remote sensing. This final map does not include potential draft local responsibility areas, but it does represent the most active regional zones for fire hazard potential. No Local, State or Federal Responsibility Areas include McFarland or the projected Sphere of Influence.

Map 4.14-1: Fire Hazard Severity Zones in State Responsibility Areas



CAL FIRE specifically designates High or Very High Fire Hazard Zones based on the fire triangle of fuel, oxygen, and ignition. These zones present a significant danger and constraint to development if present, but none appear in McFarland's City limits or its Sphere of Influence. In Map 8-5, red represents Very High Fire Hazard Zones, orange represents High Fire Hazard Zones, and yellow marks Moderate Fire Hazard Zones. Areas in grey, like McFarland, remain unclassified, or at lower risk of fire hazard. While the City does not lie within a CAL FIRE recognized Fire Hazard Severity Zone, urban structure fires remain a concern and steps to prepare for an emergency will benefit all residents.

Basic preparations for evacuation are still an important part of resident safety. Potential ignition sources present in the City today include agricultural equipment, especially during harvest, as well as normal residential and commercial operations.

The City of McFarland sits on land designated as Wildland-Urban Interface by the USGS, or the area where significant vegetation or fuel sources lie near human activity. Two kinds of development cause WUI conditions: interface, the traditional urban-rural divide, or intermix, where development occurs in pockets within an area that has high fire danger. The Sequoia National Forest lies approximately 30 miles to the east of McFarland, and that eastern half of Kern County qualifies as a significant fuel source and an area of significant fire probability, with many areas falling in a High or Very High Fire Hazard Zone.

Twenty-nine catastrophic fire events occurred in California during 2018, including the Camp Fire that devastated large swaths of Butte County. Although large wildfires are unlikely near McFarland, caution is still warranted due to significant potential fuel sources in the area including agricultural waste, liquid fuel, gaseous accelerants, and other significant local point sources of impact in a city of its size. Newer subdivisions are more likely to comply with firesafe building code and material conditions. Industrial, commercial, and residential buildings built before the codes for firesafe construction were enacted possibly pose other concerns in terms of wiring, materials, fuel load, and key evacuation standards including occupancy and initial response time. Kern County Fire maintains records of specific programs and utilities for residents, businesses, and municipalities to engage in resiliency upgrades, home hardening with a 100-foot defensible space buffer, multilingual evacuation information, and other items to assist these situations.

4.14.1.2 STANDARDS OF SIGNIFICANCE

CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to Fire Protection and Emergency Services if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Fire Protection and Emergency Services.

Methodology

Evaluation of the potential impact to Fire Protection and Emergency Services included comparison of planned buildout in the proposed Plan and any potential change to service need and capacity of Fire Protection and Emergency Service agreements in the region, including Cal Fire and the Kern County Office of Emergency Services, to fulfill the need for Fire Protection and Emergency Services. Additionally, the evaluation also involved the Plan's changes in land use as it relates to potential fire hazard increases.

4.14.1.3 Impact Discussion

This section discusses the proposed Plan specific impacts related to Fire Protection services.

PS – 1 Buildout of the proposed Plan would result in **less-than-significant** 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 Fire protection.

McFarland does not lie in any identified fire hazard severity zone. However, the Sequoia National Forest lies approximately 30 miles to the east of McFarland, and that eastern half of Kern County qualifies as a significant fuel source and an area of significant fire probability, with many areas falling in a High or Very High Fire Hazard Severity Zone.

Growth in population and activities have the potential to increase the risk of urban fires which could tax the ability of fire protection and Emergency services. Programs outlined in the proposed Plan are to reduce potential impacts by reducing vulnerability and increasing preparedness. In addition to the Plan, specific projects and development within the City are subject to separate CEQA review to analyze specific project impacts. The proposed Plan includes the following programs and policies that can assist the City of McFarland to enhance Fire Protection and Emergency services.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Policy SAF 2.3.1: Evaluate and respond to urban and wildland fire hazards affecting McFarland where present.

Program SAF 2.3.1.2: Update urban and wildland fire threat as data sources become available and seek guidance and data from Cal Fire.

Policy SAF 2.3.3: Evaluate fire threats in existing and proposed developments.

Program SAF 2.3.3.1: Coordinate fire threat evaluation with Kern County Fire, given Cal Fire threat assessments and federal data sources.

Program SAF 2.3.3.2: Enact measures for resident and employee safety in areas of recognized commercial and industrial fire threat.

Program SAF 2.3.3.3: Reduce vulnerability especially with vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.) to prevent drought/extreme weather-related fire risk.

Program SAF 2.3.3.4: Encourage commercial and industrial properties to maintain fire safe standards and operate in a safe manner when handling flammable materials or byproducts.

Policy SAF 2.3.4: Create defensible space for McFarland through best management practices.

Program SAF 2.3.4.1: Encourage abatement of potentially flammable material through trimming, thinning, or reduction of potential fuel from habitable or occupied areas according to Cal Fire defensible space standards.

Program SAF 2.3.4.2: Check with state and federal hazard management agencies for updated areas of concern in wildland and urban fire scenarios on a 10-year cycle.

Policy SAF 2.3.5: Adopt uniform building and fire codes as they are updated by the State.

Policy SAF 2.3.6: Educate the public about fire safety.

Program SAF 2.3.6.1: Promote public fire safety education programs to reduce accidents, injuries, and fires in coordination with McFarland School District and community agencies.

Program SAF 2.3.6.2: Promote public safety through Cal Fire programs, pamphlets, and education opportunities with school and community engagement in English and Spanish.

Policy SAF 4.3.1. Reduce danger to life.

Program 4.3.1.1: Map all emergency response facilities and accessways.

Program 4.3.1.2. Assess risk from evacuation and emergency response bottlenecks for hazards, particularly fire, flood, and hazardous materials.

Objective PF 3.2: Provide enough fire services for residents and businesses.

Policy PF 3.2.1: Maintain adequate staff and equipment in collaboration with Kern County.

Program PF 3.2.1.1: Continue to fund, budget, and maintain the contracted fire services from Kern County.

Applicable Regulations:

California Building Code

California Fire Code

California Public Resources Code: Division 4. Forest, Forestry and Range and Forage Lands

California Occupational Safety Health and Administration (Cal OSHA)--Part 9 of Title 24 of the California Code of Regulations

Significance Before Mitigation: Less than significant

4.14.1.4 Summary of Potential Impacts and Mitigation Measures

Fire Protection and Emergency Services require no mitigation measures.

4.14.2 Police Protection

4.14.2.1 Environmental Setting

This section describes the existing conditions of Police Protection services and examines the existing conditions of Police Protection Services and the potential impacts of build-out in the proposed Plan to these services.

Regulatory Framework

This section describes the existing regulations and existing conditions of policies that apply to Police Services. The regulatory framework falls within regional settings regarding police, California Highway Patrol and City of McFarland Police Department.

Federal Regulations

Federal Bureau Of Investigation (FBI)

The FBI targets one sworn officer per 1,000 persons for police departments.

State Regulations

No applicable state regulations.

Local Regulations

Kern County Sherriff (KCS)

The KCS provides law enforcement for unincorporated Kern County. The Sheriff's office is made up of four major divisions: the Support Services Bureau, Detentions Bureau, Law Enforcement Bureau, and Investigations Bureau. In order to manage specific concerns or identified assignments, these divisions may also be subdivided.

California Highway Patrol (CHP)

The CHP provides law enforcement of State and County highways throughout Kern County and the City of McFarland. Additionally, the CHP responds to accidents in the unincorporated areas and has mutual aid agreements with other agencies to assist in emergencies.

City of McFarland Municipal Code

Regulations applying to Police Protection Services within the City of McFarland's Municipal Code.

McFarland Police Department (CWPD)

The MPD provides law enforcement for the City of McFarland. Services and departments include patrol, investigations, a K-9 Unit, reserve officers, Chaplain, Neighborhood Watch, Volunteer program, records and communications, and property and evidence.

McFarland Municipal Code

The Municipal Code Chapter 2.28, Police Department, and Chapter 2.30, Police Protective Services, establish the standards for staffing and funding the McFarland Police Department.

Existing and Baseline Conditions

The McFarland Police Department is responsible for providing police protection services to the citizens of McFarland. The police station is located at 401 West Kern Avenue in City Hall. The Police Department is a full-service department. Services include the Patrol Bureau, Investigations Bureau, Traffic Bureau, K-9 Unit, Bicycle Unit, Reserve Officers, Chaplain Bureau, Animal Control, Neighborhood Watch Explorer Program, Volunteer Program, Property and Evidence Unit, Communications Bureau, Records Bureau and Police Reserves. The Department operates a 24-hour dispatch center and provides 24-hour patrols in the community.

The crime rate in McFarland in 41, indicating that McFarland is safer than 41% of cities in the United States. This data used crime information from the City and examined reports of murder, rape, robbery, assault, and property crime, as shown in Table 4.14-1. Crime rates are often correlated with public safety funding, particularly police services. From Fiscal Year 2018 to 2019, there was a drop in overall filled officer positions from 22.63 salaried officers to 19.73 in 2019.

TABLE 4.14-1: MCFARLAND CRIME DATA, 2018

Crime	Number in 2018	McFarland Average per 1,000 residents	United States Average per 1,000 residents
Murder	2	.13	.05
Rape	16	1.06	.42
Robbery	20	.33	.98
Assault	44	2.92	2.49
Burglary	54	3.58	4.30
Theft	83	5.50	16.94
Motor Vehicle Theft	47	3.11	2.37
Source: Neighborhood Scout			

Community feedback suggested that there was a huge community loss when the last Chief of Police moved to another community. Additional community outreach suggested that residents feel the most unsafe when they are in the eastern side of the City and identified police services as a focus for community improvement.

4.14.2.2 Standards of Significance

CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to police services if it would:

2. 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 Police protection.

Methodology

Evaluation of the potential impact to fire and emergency services was based on a comparison of the proposed Plan and the Federal Bureau of Investigation's police service ratios to determine the service ratios necessitated by the plan.

4.14.2.3 Impact Discussion

This section discusses the proposed Plan specific impacts related to Police Protection services.

PS – 2 Buildout of the proposed Plan would result in **less-than-significant** 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 Police protection.

The proposed Plan aims to ensure sufficient public facilities and services in the City of McFarland. Population growth has the potential to impact the ability of police services, but policies and programs outlined in the Plan can help the City meet demand for police services. Currently, the City of McFarland meets the FBI target of one officer per 1,000 residents and under the Plan, the City can maintain the standard officer-to-resident ratio. Therefore, the Plan would have a less-than-significant impact. The

proposed Plan includes the following programs and policies that can assist the City in adapting to any impacts to Police Protection services.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Policy ED 2.2.2: Improve public safety and perception of public safety.

Program ED 2.2.2.1: Build relationships between police and businesses.

Program ED 2.2.2.2: Build relationships between police and neighborhood residents.

Policy PF 3.1.1: Maintain adequate police staffing levels and equipment.

Program PF 3.1.1.1: Continue to fund and hire police personnel toward the goal of one officer per 1,000 population.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

4.14.2.4 Summary of Potential Impacts and Mitigation Measures

Police Protection Services requires no mitigation measures.

4.14.3 SCHOOLS

4.14.3.1 ENVIRONMENTAL SETTING

This section describes the existing conditions of Schools located within the City of McFarland and the potential impacts of buildout in the proposed Plan.

Regulatory Framework

Federal Regulations

Every Student Succeeds Act (ESSA) 2015

The "No Child Left Behind" Act of 2001 (NCLB) was replaced by the "Every Student Succeeds" Act (ESSA) in 2015. This law provides states increased authority on standards, assessments, accountability, supports, and interventions while preserving the general structure of the ESSA funding formulas. Most of the new provisions do not take effect until the 2017–18 school year, making the 2016–17 school year a transition year for local educational agencies (LEAs).

State Regulations

Leroy F. Greene School Facilities Act: Senate Bill 50 (SB 50)

SB 50 establishes a standardized development fee, which generally provides for a 50/50 local and state funding match, limiting local jurisdictions' ability to require mitigation of impacts on school facilities as an approval condition. This legislation also establishes a fee structure depending on the following: the availability of state funding, district eligibility, bonding capacity, year-round instruction, and proportion of mobile classrooms.

California Government Code, Section 65995(B), And Education Code Section 17520

Education Code Section 17520 authorizes the levy of development fees by school districts for use within the boundaries of the school district. SB 50 (above) amended California Government Code Section 65995, which requires an increase, per inflation, of the maximum square footage assessment for development fees. In 2012, the State Allocation board increased the allowable school facility fees (Level 1 School Fees) from $2.97 to $3.20 per square foot for 500 or more feet of residential development, and $0.47 to $0.51 per square foot for applicable commercial/industrial development.

California Department Of Education

The California Department of Education (CDE) develops standards and carries out programs so that California students will gain the highest level of academic knowledge, applied learning, and performance

skills to ensure civic and economic progress. The CDE adopts and support academic content and performance standards in the four core subjects for kindergarten and grades 1-12.

School Accountability Report Card

The School Accountability Report Card (SARC) requires all schools receiving state funding to prepare a SARC for each academic year. This information provides communities and parents information about public schools and allows for evaluation and comparison of schools based on a variety of indicators. Indicators include standardized test performance, enrollment and capacity evaluations, and facility maintenance. The SARC also acts as a progress report for a school's goal achievements.

California Standardized Tests

The State of California requires standardized tests in order to evaluate academic achievement in all public schools. Schools are rated in accordance with the State's Academic Performance Index (API) and results are included on the School Accountability Report Card (see above).

Local Regulations

Kern County Board of Education

The Kern County Board of Education (Board) supervises the educational and public school system in Kern County for levels kindergarten through the 12th grade. There are seven members on the Board that meet monthly to discuss and develop goals and policies to the Superintendent of Schools and the County School Districts. McFarland Unified School District falls under area two which is represented by Board member, James L. Bartleson.

Existing and Baseline Conditions

The McFarland Unified School District (MUSD) serves 3,570 students, with a maximum capacity of about 3,804 students in the facilities. The district has a student to faculty ratio of 24 to 1, which is below the state maximum ratio of 30 students to 1 faculty member. According to MUSD reports, graduation rates for the school district are exceptionally high, nearly 99%. All facilities within the school district are also structurally sound and in good condition. Within the Public Review Draft of the City of McFarland's General Plan Amendment Environmental Impact Report (EIR), the City identified the school district's facilities capacity as 3,252 students, but with a newly constructed elementary school increased capacity to 3,804. This number is based on the number of classrooms and general facilities.

4.14.3.2 Standards of Significance

CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on School capacity and facilities if it would:

3. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Schools.

Methodology

Evaluation of the potential impact to public schools was based on the comparison of buildout in the proposed Plan to the California Department of Education student to teacher ratio to determine the potential increase for capacity and impacts to Schools.

4.14.3.3 Impact Discussion

This section discusses the proposed Plan specific impacts related to the City of McFarland School capacity for service and facilities.

PS – 3 With mitigation, buildout of the proposed Plan would result in **less-than-significant** 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 Schools.

The proposed Plan aims for sufficient public facilities, services, and utilities for the City of McFarland. The current teacher to student ratio (1:24) is also lower than the national average (1:30). Construction of a new elementary school in 2016 increased facility capacity to 3,804. However, population growth under the proposed Plan could impact school capacity. Therefore, the following policies and programs in the Plan can help to assist the City of McFarland and the school district to adapt to growth in school population:

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Objective PF 4.1: Increase the capacity of school facilities which have reached or are near enrollment capacity.

Policy PF 4.1.1: Coordinate rehabilitation and maintenance of existing facilities with the McFarland School District.

Program PF 4.1.1.1: Expand according to the McFarland school district's growth plan.

Program PF 4.1.1.2: Identify where additional school capacity is needed based on proposed future development utilizing the most recent McFarland School District *School Enrollment Projections* report.

Applicable Regulations: None

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

4.14.3.4 Summary of Potential Impacts and Mitigation Measures

The following mitigation measures are intended to mitigate potentially significant impacts regarding Schools.

PS – 3 Buildout of the proposed Plan would result in **potentially significant** 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 Schools.

The proposed Plan aims for sufficient public facilities, services, and utilities for the City of McFarland. However, population growth under the proposed Plan could impact school capacity. The following mitigation measures are proposed to address this likely deficiency.

Mitigation PS-3a:
Work with school district to identify population growth thresholds that require new school facilities to maintain adequate level of service for the growing youth population.

Significance After Mitigation: Less than significant.

4.14.4 PARKS

4.14.4.1 ENVIRONMENTAL SETTING

This section potential impacts of buildout in the proposed Plan for Parks within the City of McFarland.

The section on Recreation includes a detailed discussion on parks.

Regulatory Framework

Refer to section on Recreation for details

Existing and Baseline Conditions

Refer to section on Recreation for details

4.14.4.2 STANDARDS OF SIGNIFICANCE

CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on School capacity and facilities if it would:

4. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for Parks.

Methodology

Evaluation of the potential impact to Parks was based on the comparison of buildout in the proposed Plan to the National Recreation and Parks Association's standards. Refer to section on Recreation for details.

4.14.4.3 Impact Discussion

This section discuss the proposed Plan specific impacts related to the City of McFarland School capacity for service and facilities.

PS – 4 Buildout of the proposed Plan would result in **less-than-significant** 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 Parks.

The proposed Plan aims for sufficient public facilities, services, and utilities for the City of McFarland. Refer to section on Recreation for details.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

4.14.4.4 Summary of Potential Impacts and Mitigation Measures

Parks require no mitigation measures. Refer to section on Recreation for details.

4.14.5 Other Public Facilities

Libraries are essential community centers that provide opportunities for education and community interaction. This section addresses Library Service and other public facilities in the City of McFarland.

4.14.5.1 Environmental Setting

Regulatory Framework

This section discusses federal and local regulations only as there are no applicable state regulations.

Federal Regulations

American with Disabilities Act (ADA)

The Americans with Disabilities Act of 1990 (ADA) maintains the national standard for pedestrian accessibility. ADA prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and City government services, public accommodations, commercial facilities, and transportation. This includes standards that the City of McFarland needs to comply with regarding access to open space as well as access to publicly maintained recreational facilities.

State Regulations

There are no applicable state regulations

Local Regulations

Kern County Library Facilities Master Plan, 2020

The Kern County Library Facilities Master Plan, 2020 provides a broad outline of the County's 20-year plan for improving and expanding library branches. The Plan prioritizes library projects for State Bond Act funding.

Existing and Baseline Conditions

There is one branch of the Kern County Public Library system located in McFarland. The branch, named Clara M. Jackson is located along West Kern Avenue and serves the community with daily activities and other events. Most of the events are serving young children and after school type activities. The facility includes a multi-purpose community meeting room, public computers, and materials in both English and Spanish languages. According to the 2016 McFarland General Plan Environmental Impact Report, it was

opened on March 23, 1995. Due to budgetary constraints, it is only open 24 hours a week, and has fewer resources provided than most comparable facilities according to staff.

4.14.5.2 Standards of Significance

CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to Library Services if it would:

5. 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 Other public facilities.

Methodology

Evaluation of the potential impact to Library Services was based on the comparison of build-out in the proposed Plan and existing library service information in the City of McFarland.

4.14.5.3 Impact Discussion

PS – 4 With mitigation, buildout of the proposed Plan would result in **less-than-significant** 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 Other public Facilities.

The proposed Plan aim for sufficient public facilities, services, and utilities for the City of McFarland. Buildout in the proposed Plan does see increased population in McFarland which would likely increase demand for library services. This could require new construction for library facilities in the City of McFarland. The proposed Plan includes the following programs and policies that can assist the City of McFarland meet capacity for Library Service in adapting to population growth under the Plan.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Objective PF 5.1: Expand youth programs citywide.

Policy OS 2.3.2: Enhance recreational programs suitable for all ages and ability levels.

Applicable Regulations:

California Building Code

Americans with Disabilities Act (ADA)

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

4.14.5.4 Summary of Potential Impacts and Mitigation Measures

The following mitigation measures are intended to mitigate potentially significant impacts regarding Other public facilities like libraries.

PS – 5 Buildout of the proposed Plan would result in **potentially significant** 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 Other public facilities.

The proposed Plan aims for sufficient public facilities, services, and utilities for the City of McFarland. However, population growth under the proposed Plan could impact demand for library. The following mitigation measures are proposed to address this likely deficiency.

Mitigation PS-5a:

Coordinate with Kern County Library to address the specific needs of the community and funding sources required to build library service and other services to meet those needs.

Significance After Mitigation: Less than significant.

4.14.6 REFERENCES

California Department of Education. (2018). Class Size Penalties - CalEdFacts. Retrieved from https://www.cde.ca.gov/fg/aa/pa/cefcsp.asp

California Emergency Medical Services Authority. (2019). Regulations. Retrieved from https://emsa.ca.gov/regulations/

City of McFarland (Prepared by Michael Baker International). (2016). Public Review Draft Environmental Impact Report- City of McFarland General Plan Amendment. City of McFarland: McFarland, CA

4.15 Recreation

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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?			X	
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Parks are critical community assets that provide opportunities to members of the public for outdoor recreation, exercise, and community interaction. This section addresses Parks within the City of McFarland.

4.15.1 Environmental Setting

This section describes the existing conditions of Parks located within the City of McFarland and the potential impacts of build-out of the proposed Plan to Parks.

4.15.1.1 Regulatory Framework

Federal Regulations

Americans With Disabilities Act (ADA)

The Americans with Disabilities Act of 1990 (ADA) maintains the national standard for pedestrian accessibility. ADA prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and City government services, public accommodations, commercial facilities, and transportation. This includes standards that the City of McFarland needs to comply with regarding access to open space as well as access to publicly-maintained recreational facilities.

National Recreation And Park Association (NRPA)

The National Recreation and Park Association (NRPA) sets the standard for land dedicated to parks based on population. NRPA categorizes parkland in three different typologies: Neighborhood, Community, and Regional. The overall standard for all parks is approximately 6.25 to 10.5 acres per 1,000 people. The standard for neighborhood parks is between 1 to 2 acres of park space per 1,000 people. The standard for community parks is between 5 and 8 acres per 1,000 people. The standard for regional parks is between 5 to 10 acres per 1,000 people (National Recreation and Park Association, 2012).

State Regulations

California Government Code: Open Space Lands -Sections 65560–65568

This portion of California planning law defines open space and requires cities and counties to prepare an open space plan as a required element of its General Plan. Building permits, subdivision approvals, and zoning ordinance approvals must be consistent with the local open space plan.

California Public Resources Code: Open ‑ Space Elements And Trail Considerations -Section 5076

This law requires that during development of the General Plan, counties should consider trail - _oriented recreational use and should consider the community demand in developing specific open space programs. Additionally, cities should consider the feasibility of integrating current and future trail routes with appropriate segments of the State system.

The Quimby Act

The Quimby Act, or the Subdivision Map Act allows communities to require the dedication of land and/or the payment of in-lieu fees for park and recreation purposes. Required dedication and/or fees can be based on factors such as adjacent residential density and parkland cost. Land or fees dedicated due to the Quimby Act are only able to be used for developing new or rehabilitating existing park or recreational facilities. The maximum dedication and/or fee allowed under current State law equates to three acres of parkland per 1,000 persons, unless the park acreage of a municipality exceeds that standard, in which case the maximum dedication is five acres per 1,000 residents.

Local Regulations

Kern County Municipal Code

Kern County holds valuable land in open space preservation for natural resource use. These protections, detailed in the Kern County Municipal Code and the Open Space Element of the County General Plan,

provide protections that McFarland might follow. Mined petroleum and minerals additionally supply a key economic resource for the future of McFarland.

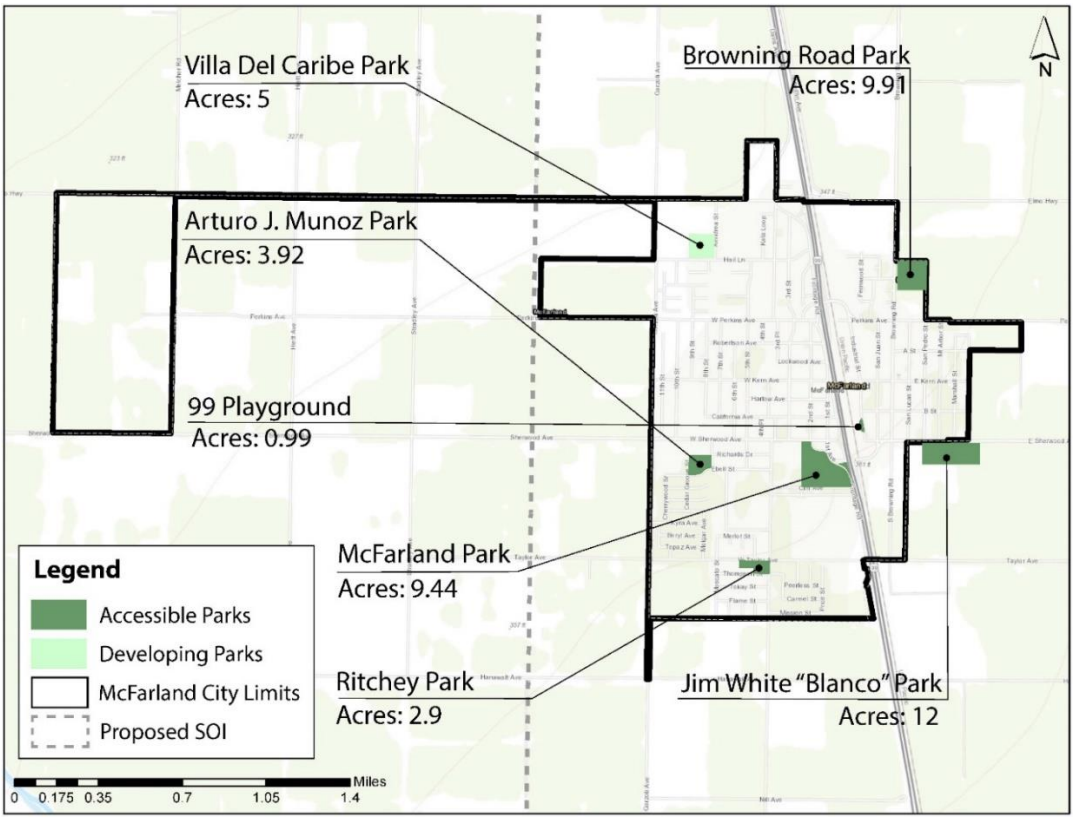
Kerns County's Public Facilities and Services Element contains several goals pertaining to open space as a recreational asset. These goals aspire to provide citizens with the full benefits of habitat and open space in fresh and vibrant ways. Fostering this vision provides a variety of activities to the residents and visitors of McFarland, thus guiding future open space use and engagement.

4.15.1.2 Existing and baseline Conditions

There are seven facilities located within McFarland's Sphere of Influence (SOI) that qualify as recreational open spaces. As shown in Map 4.15-1, these park facilities include five developed parks:

- McFarland Park
- Browning Road Park
- Ritchey Park
- Arturo J. Munzo Park
- Jim White "Blanco" Park

Map 4.15-1: Park Locations and Acreage



Two other parks in McFarland do not have formal names. These include the Highway 99 park, a playground and shade structure located immediately east of Highway 99, and the grassy field located by the public library with no amenities. The library field location presents potential for open space development and would satisfy a need for additional park density in the area. An 8th park site, Villa Del Caribe Park, is set to be developed on the far north end of town, bordered by Hail Lane and Valencia Drive. The site is an undeveloped field bounded by sidewalks and near to other parcels under development. The City has received a grant to develop a community garden between the railroad and Industrial Street north of Sherwood Avenue.

McFarland prides itself on its youth sports, which bring the community together in McFarland's neighborhood parks and foster community engagement and civic pride. Although parks in McFarland provide an essential space to express community identity, input from residents indicate a perceived lack of security and reports of gang activity. Parks that are not well lit can become dangerous places at night, as they offer places out of sight from nearby residential uses. The City has responded to these security concerns by implementing a ban on all alcohol without a permit in public places, including parks.

The parks holding the fewest amenities include the Highway 99 playground, Arturo J. Munoz Park, and the library field. Exercise equipment appears least frequently of all amenities in Map 4.15-2, with only McFarland Park and Ritchey Park hosting those facilities. Publicly accessible exercise machines are of great benefit to the community, as they offer exercise options to multiple publics and allow for social interaction. If presented and maintained properly, these facilities can appeal to disabled persons and seniors who could not traditionally enjoy access to park facilities. Through ADA certification, park features allow access to all, benefiting the equity and accessibility of the community. Multiple residents in community meeting feedback mentioned a desire for more basketball courts, which are present in three of the parks. McFarland's parks, which contain multiple open fields and already paved parking areas, have the potential to accommodate this use. In addition, a possible water-saving strategy could involve the conversion of some lawn space into hardscape for basketball and collecting water runoff into existing landscaping uses.

The City of McFarland's budgetary documents indicate that park development remains in-progress, and that the initial operation and maintenance of the park by the Parks District/Tri-Agency will begin in the fiscal year 2020. The budgetary documents also describe that the future maintenance of Villa Del Caribe presents one of the largest new expenses incurred by the City in ongoing maintenance costs despite low initial capital cost. Potential discussion of the priorities at a municipal level for future park projects, even though grant monies might bear initial capital costs, would help to ensure productive and well-maintained facilities. Table 4.15-1 and Map 4.15-2 indicate public amenities and services located in each of the presently developed park facilities.

MAP 4.15-2: PARKS AND PARK SERVICES IN MCFARLAND

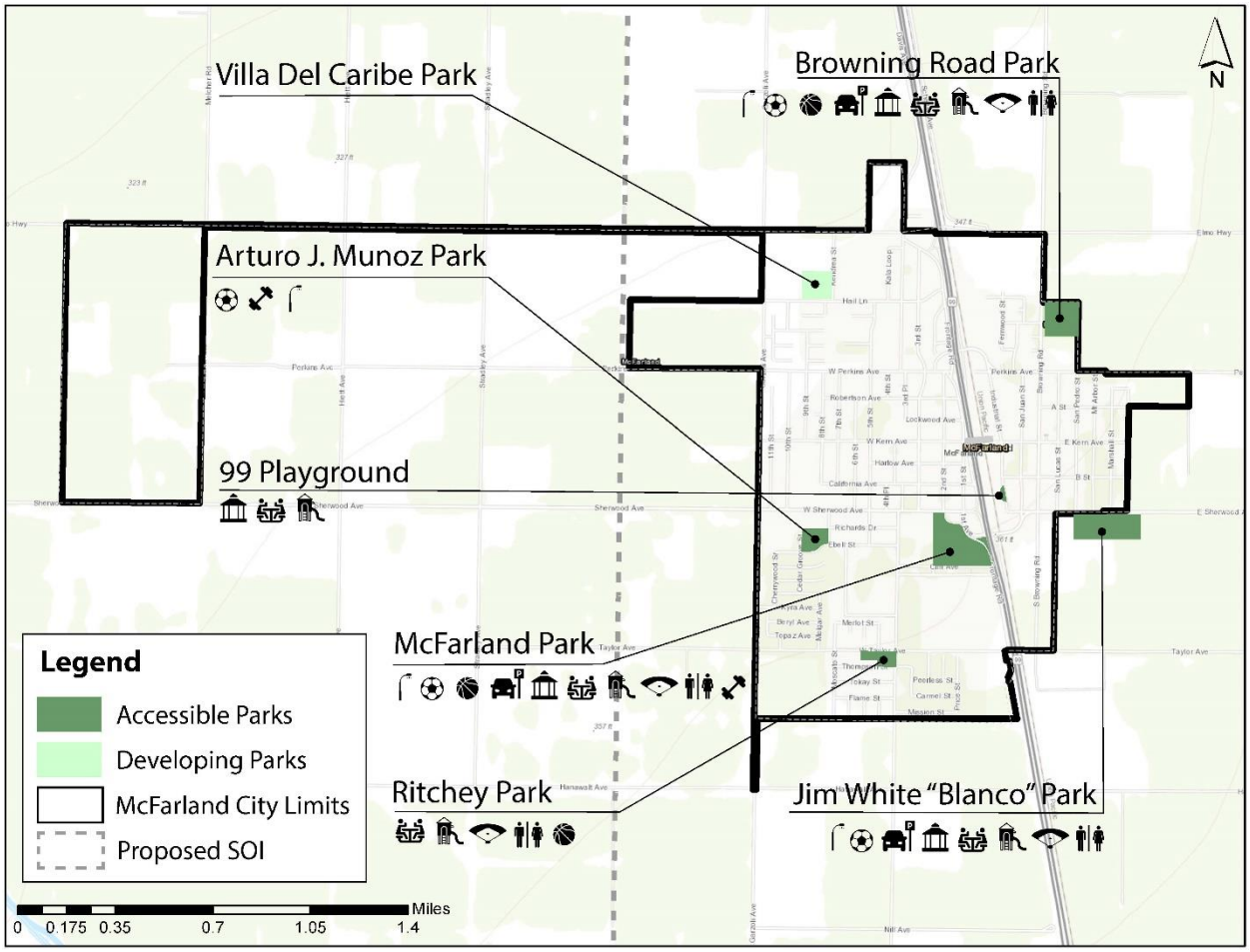


TABLE 4.15-1: PARK SERVICES

PARK NAME	PARKING	OPEN FIELD	PLAYGROUND	PICNIC TABLES	SHADES	BATHROOM	OUTDOOR EXERCISE EQUIPMENT	BASKETBALL COURT	BASEBALL FIELD	BBQ STANDS
McFarland Park										
Browning Road										
Jim Blanco White										
Arturo J. Munoz										
Ritchey Park										
SR 99 Park										
Library Field										

Green indicates presence of listed amenity. Red indicates potential for listed amenity.

4.15.2 Standards of Significance

4.15.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to Parks if it would:

1. 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;
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.15.2.2 Methodology

The potential impacts to Parks are based on evaluation of the proposed Plan in comparison with park standards set by the National Recreation and Park Association (NRPA), which sets standard for land dedicated to parks based on population.

4.15.3 Impact Discussion

This section discusses the proposed Plan specific impacts related to City of McFarland library and public park service and facilities.

Rec – 1 Buildout of the proposed Plan would result in **less-than-significant** adverse impacts regarding 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.

There are currently 7 parks and 35 acres of parks in McFarland. The proposed Plan proposes an increase in park acreage overall. The Plan expands the amount of parkland within the City of McFarland to 66 acres achieving a parks-to-residents ratio of 2 acres per 1,000 residents. McFarland's ratio under the proposed Plan is consistent with the national parks-to-residents average (1 to 2 acres per 1,000 residents) and higher than the ratios of some of the other San Joaquin Valley cities. While population growth would inevitably require demand for park use, the addition of park space would preclude overuse of parks to result in their

deterioration. Additionally, the proposed Plan includes the following programs and policies to assist the City of McFarland in meeting capacity for public parks.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Policy OS 1.3.1: Work with the McFarland Recreation and Parks District to maintain or upgrade park amenities.

Program OS 1.3.1.1: Add sitting structures, trash cans, lighting, street trees, and widened sidewalks to 5th street, W Sherwood Street, Woodruff Avenue, W Kern Avenue, E Kern Avenue, Browning Road and E Sherwood Avenue.

Program OS 1.3.1.2: Install new motion-detecting lights in areas where residents feel unsafe, ensuring that new installations do not disturb surrounding residential areas.

Program OS 1.3.1.3: Provide attractive, water-wise trees and shrubs within parking areas to reduce the heat island effect and increase ground permeability.

Program OS 1.3.1.4: Include bike racks in open spaces to encourage biking.

Program OS 1.3.1.4: Provide multi-age playground and park equipment.

Policy OS 2.2.1: Increase functionality of outdoor open spaces and facilities.

Program OS 2.2.1.1: Expand programming of City parks and recreation facilities.

Program OS 2.2.1.2: Add outdoor exercise equipment, playgrounds, and other recreation opportunities to public open space where practical.

Policy PF 6.1.1: Improve safety near parks, schools, and other pedestrian corridors.

Applicable Regulations:

NRPA Park Standards

Americans with Disabilities Act (ADA)

Significance Before Mitigation: Less than significant

REC – 2 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT INCLUDING RECREATIONAL FACILITIES OR BY REQUIRING THE CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES

The Plan proposes an increase in park acreage overall to 66 acres. This expansion would achieve a parks-to-residents ratio of 2 acres per 1,000 residents, which would be consistent with the national parks-to-residents average of 1 to 2 acres per 1,000 residents. The increase in park space is to improve the scenic beauty of the City rather than impose an adverse physical impact. Additionally, the proposed Plan includes the following programs and policies to assist the City of McFarland in enhancing recreational facilities.

Policy OS 1.3.1: Work with the McFarland Recreation and Parks District to maintain or upgrade park amenities.

Program OS 1.3.1.1: Add sitting structures, trash cans, lighting, street trees, and widened sidewalks to 5th street, W Sherwood Street, Woodruff Avenue, W Kern Avenue, E Kern Avenue, Browning Road and E Sherwood Avenue.

Program OS 1.3.1.2: Install new motion-detecting lights in areas where residents feel unsafe, ensuring that new installations do not disturb surrounding residential areas.

Program OS 1.3.1.3: Provide attractive, water-wise trees and shrubs within parking areas to reduce the heat island effect and increase ground permeability.

Program OS 1.3.1.4: Include bike racks in open spaces to encourage biking.

Policy PF 6.1.1: Improve safety near parks, schools, and other pedestrian corridors.

Program PF 6.1.1.1: Conduct a lighting audit to determine where lighting is most needed in collaboration with the Tri-Agency.

Program PF 6.1.1.2: Pursue funding opportunities for construction and maintenance of lighting facilities.

Program PF 6.1.1.3: Meet lighting operating costs with special assessment fee on businesses.

Policy AG 1.2.2: Use sustainable open space management practices.

Program AG 1.2.2.1: Encourage practices that reduce the strain on the hydrological infrastructure.

Program AG 1.2.2.2: Encourage practices that reduce wastewater demand on the flow-limiting wastewater pipe under Highway 99.

Program AG 1.2.2.3: Enact open-space zoning, such as exclusive agriculture zones, large-lot zones, and overlay zones for hazard areas, to be consistent with this plan.

Program AG 3.1.2.3: Adopt water-wise landscaping at public facilities and parks to reduce demand.

Program AG 3.1.2.4: Showcase drought tolerant landscapes, for instance, with model water-efficient landscapes in public parks, that private citizens could emulate to help encourage broad adoption.

Applicable Regulations:

NRPA Park Standards

Americans with Disabilities Act (ADA)

Significance Before Mitigation: Less than significant

4.15.4 Summary of Potential Impacts and Mitigation Measures

Recreation requires no mitigation.

4.15.5 References

California State Parks. (2015). Statewide Comprehensive Outdoor Recreation Plan (SCORP). Retrieved from https://www.parksforcalifornia.org/scorp

City of McFarland (Prepared by Michael Baker International). (2016). Public Review Draft Environmental Impact Report- City of McFarland General Plan Amendment. City of McFarland: McFarland, CA

4.16 Transportation

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			x	
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? . . . . *i.e., Is VMT exceeding an applicable threshold of significance?*			x	
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				x
4. Result in inadequate emergency access?			x	

4.16.1 Environmental Setting

4.16.1.1 Regulatory Framework

This section describes and summarizes the key federal, State, County, and City statutes, regulations, and policies that apply to the proposed Plan. The following subsections provide context for discussion of impacts of the proposed Plan.

Federal Regulations

United States Department of Transportation

The Federal Highway Administration (FHWA) is the agency of the USDOT responsible for the federally funded roadway system. Federal laws and regulations related to street maintenance, traffic safety, and transportation funding among many other aspects of the transportation network, are established through

the framework for transportation planning at the federal level: Moving Ahead for Progress in the 21st Century (MAP-21), approved in 2012.

Surface Transportation Assistance Act (STAA)

The STAA, passed in 1982, allows trucks to operate on the interstate and certain primary routes collectively called the National Network. These routes, referred to as STAA routes, have larger turning radii than most local roads can accommodate.

Americans with Disabilities Act (ADA)

The ADA of 1990 provides comprehensive rights and protections to individuals with disabilities. The ADA was created to guarantee equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities. In order to ensure accessibility, the Department of Justice revised regulations for Titles II and III of the ADA in September 2010. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design, or the "2010 Standards." Compliance with the 2010 Standards has been required for all new construction and alterations since March 2012. The guidelines address various issues including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way. These guidelines would apply to proposed roadways in the Plan Area.

State Regulations

California Department of Transportation (Caltrans)

Caltrans is the primary responsible party for transportation issues in the State of California. The Caltrans Transportation Plan (CTP) (2035) provides broad system concepts, strategies, and performance measures for all modes on State facilities.

Caltrans is tasked with constructing and maintaining the State highway system. Caltrans is the approval body for the planning, design, and construction of improvements for all State-controlled facilities including State Route (CA) 43 and CA 46.

Caltrans' Transportation Concept Reports identify existing conditions and specific long-range improvements for specific State highway segments. Long-range improvements are identified to improve existing facilities up to the design concept expected to adequately serve 20-year traffic forecasts.

The following Caltrans procedures and directives are relevant to Plan Components, particularly State roadway facilities:

- *Level of Service (LOS) Target* – Caltrans historically maintained a minimum LOS between LOS C and LOS D for all of its facilities. Where an existing facility is operating below the C/D threshold, the existing measure of effectiveness should be utilized as the minimum LOS for future development.
- *Vehicle miles traveled (VMT) Target* – Vehicle miles traveled measures the total amount of travel of all individuals or vehicles in a region over a specified period. With the passing of

California Senate Bill 743 (SB 743), level of traffic congestion (measured in terms of LOS) is no longer considered the measure of significant environmental impact within transportation analyses under the California Environmental Quality Act (CEQA). VMT is considered a more complete performance measure because it addresses a wider range of transportation issues and goals, including congestion management, infill development, public health through active transportation, and greenhouse gas emission reduction. The VMT reduction standard per OPR's 2018 Technical Advisory states that in most instances, a per capita or per employee VMT that is 15% below that of existing development may be a reasonable threshold.

- *Project Development Procedures Manual* – This manual outlines relevant statutory requirements, planning policies, and implementation procedures regarding transportation facilities. It is continually and incrementally updated to reflect changes in policy and procedures.
- *Deputy Directive 64* – This directive requires Caltrans to consider the needs of non-motorized vehicles in all programming, planning, maintenance, construction, operation, and project development activities and products. This includes incorporation of the best available standards in all of Caltrans's practice.
- *Deputy Directive 64-R1* – This directive requires Caltrans to provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State highway system. Caltrans supports bicycle, pedestrian, and transit travel with a focus on "complete streets."
- *Directors Policy 22* – This policy establishes support for balancing transportation needs with community goals. Caltrans seeks to involve and integrate community goals in the planning, design, construction, and operations processes, including accommodating the needs of bicyclists and pedestrians.

Senate Bill 743

SB 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing the criteria, OPR took guidance from the general principles contained within CEQA, the CEQA Guidelines, and applicable case law. From July 2020, development proposals in California are to base impact analysis on vehicle miles travelled (VMT) reduction.

California Complete Streets Act of 2008

The California Complete Streets Act, Assembly Bill (AB) 1358, requires cities and counties, when updating their general plans, to include complete street polices so that roadways are designed to safely accommodate all users, including motorists, bicyclists, pedestrians, transit riders, children, elderly, and persons with disabilities.

California Transportation Commission (CTC)

The CTC consists of nine members appointed by the Governor. The CTC is responsible for programming and allocation of funds for the construction of highway, passenger rail, and transit improvements

throughout the State, including the Plan Area. The CTC is also responsible for managing funding for the State Transportation Improvement Program (STIP) and the State Highway Operation and Protection Program (SHOPP).

Local Regulations

Kern Council of Government

2014 Regional Transportation Plan/ Sustainable Community Strategy

The Kern Council of Governments (Kern COG), the regional transportation planning agency for Kern County, developed and adopted the Regional Transportation Plan (RTP) in June 2014. The RTP looks 26-years ahead and establishes policies, goals, and actions to guide development of the planned multimodal systems in Kern County. The RTP complies with State and Federal transportation planning requirements for short-term and long-range transportation planning. Kern COG's comprehensive RTP examines the roadway network and aims to improve the existing transportation system through the year 2040.

Regional Transportation Improvement Program (RTIP) 2014

Kern COG adopted its 2014 Regional Transportation Improvement of Projects in 2013. Kern COG identified seven projects for construction by the California Transportation Commission including State Route 46 with segments 1, 2, 4 and 4A, extending through the City of McFarland.

County of Kern

Kern County Regional Bicycle Plan Volumes I & II

The bicycle master plan and complete streets recommendations focus on the unincorporated portions of Kern County, including Metropolitan Bakersfield, the Greater Tehachapi Area, the Kern River Valley, Indian Wells Valley and Lake Isabella.

The Plan proposes 751 miles of new bikeways, including 41 miles of Class I bike paths, 291 miles of Class II bike lanes, 99 miles of Class III bike routes, 188 miles of Class III bike routes on State routes, and 16 miles of Neighborhood Green Streets (Kern County, 2012). It includes both short-term and long-term bicycle parking facilities. The Kern County Bicycle Master Plan and Complete Streets Recommendations also include recommendations for education, encouragement, enforcement, and evaluation programs. Examples include public awareness campaigns, bike share, targeted bicycling enforcement, and annual bicycle counts

County Traffic Impact Analysis

Kern County has established guidelines that determine when a traffic impact analysis

must be prepared when a development project is proposed in the County. According to the County's Subdivision Ordinance, a traffic impact study must be prepared if it is expected to generate more or less than 50 trips per day; however, specific circumstances require a traffic study. Kern County should not allow new roads to be unpaved if they will be serving at least 50 vehicles per day.

Kern County General Plan (2009)

The Kern County General Plan includes a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes,

terminals, and other local public utilities and facilities, all correlated with the land use element of the plan. The County identifies several California Court examples that have required local governments to update their circulation element to be all correlated with the land use element of the plan. Under the future growth section of Kern County's General Plan, one goal states, "Kern County intends to make the County' land use and circulation plans in accord with 21st Century growth and lifestyle," (Kern County, 2009).

Kern County Air Pollution Control District

In compliance with California's Clean Air Act, Kern County's Air Pollution Control District was established to attain and maintain National and State Ambient Air Quality Standards and to ensure air pollutants do not pose a nuisance or significant public health threat.

4.16.1.2 Existing and baseline Conditions

The majority of McFarland's existing road network is automobile oriented. 94.2% of McFarland's residents travel to work by automobile. According to the 2017 American Community Survey (ACS), 79.0% of residents drove alone to work in a single-occupancy vehicle and 15.1% carpooled in a car, truck, or van. 33.8% of respondents take between 15 minutes and 19 minutes to commute to work. Of the households with workers 16 years and over, 36.1% have 3 or more vehicles available for use. McFarland's street layout is grid system divided by Highway 99 with connections to neighboring cities.

Vehicular Circulation

Caltrans manages the highway that connects the McFarland road network to Kern County and adjacent cities. McFarland is served by a single highway. Map 5-1 displays the road network in McFarland. On the map, Highway 99 is noted with the blue line, arterial streets with the pink line, collectors with the gold line, and local roads with the green line.

Functional Roadway Classifications

The following content defines the existing road hierarchy in the City, from the largest to smallest road. Arterials carry large volumes of traffic and may connect to freeways, collectors link arterials and local streets while also providing direct access to properties, and local streets carry the least volume of traffic.

Arterial Streets

An arterial road is a high-capacity road with the primary function to connect traffic from collector roads to freeways that connect the City to the region with a high level of service. In McFarland,

arterial streets consist of two-to-four lane facilities. Also, the arterial streets connect the City to the farm fields in neighboring County-owned land.

Collector Streets

Collector streets function to move traffic from local streets to arterial roads. Collector roads provide connectivity to residential, commercial, and industrial land uses.

Local Streets

Local streets provide direct access to abutting properties and allow for localized movement of traffic. These streets have the lowest speed limits and carry low volumes of traffic.

Existing Network

Caltrans manages the highway that connects the McFarland road network to Kern County and adjacent cities. McFarland is served by a single highway. Map 4.16-1 displays the road network in McFarland. On the map, Highway 99 is noted with the blue line, arterial streets with the pink line, collectors with the gold line, and local roads with the green line.

Highway 99 runs through McFarland in the north-south direction. The highway separates the City into two distinct sides with three overpasses connecting the City. Highway 99 connects McFarland to Bakersfield, 25 miles south, and Delano, around 7 miles north.

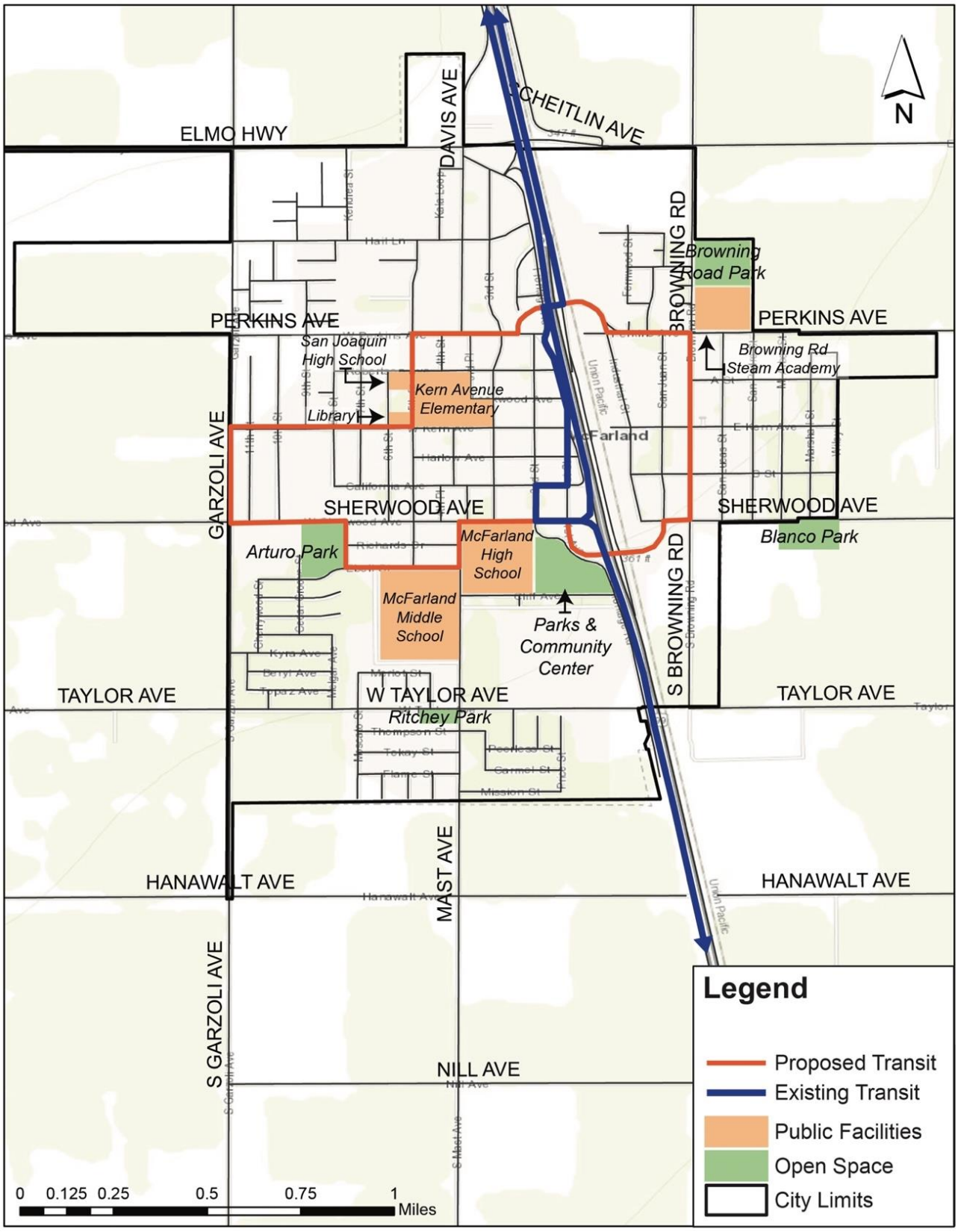
Arterial streets in McFarland include:

- Garzoli Avenue,
- Elmo Highway,
- Sherwood Avenue, and
- Hanawalt Road

Major collector streets include:

- Stradley Avenue,
- Mast Avenue,
- Third Street,
- Hail Lane,
- Second Street,
- Browning Road,
- Driver Road,
- Nill Avenue,
- Taylor Avenue,
- Perkins Avenue, and
- Peterson Road

MAP 4.16-1: EXISTING ROAD NETWORK IN MCFARLAND



Collector streets include:

- 5th Street,
- 2nd Street,
- Davis Street,
- 3rd Street, and
- Kern Avenue

Existing VMT

In response to Senate Bill 743 requiring lead agencies to assess VMT impacts of projects, the California Department of Transportation (Caltrans) provides data from the California Statewide Travel Demand Model (CSTDM) for use to assess VMT resulting from residential and office land use projects, and to set thresholds of significance. The City of McFarland and its Sphere of Influence falls within Travel Analysis Zone (TAZ) 2949. According to the CSTDM, McFarland had a per capita home-based VMT of 17.7 miles in 2010, which was projected under baseline conditions to reduce to 16.8 for a 5 percent reduction. Similarly, McFarland had an employee based VMT of 21.8 miles per employee in 2010, which was projected under baseline conditions to reduce to 18.5 for a 15 percent reduction. These levels of baseline reduction in VMT are below the greenhouse gas reduction thresholds implicit in Table 4.16-1.

TABLE 4.16-1: GREENHOUSE GAS EMISSIONS REDUCTION TARGETS

Legislative Mandates/ State Policies	Description of Thresholds
Assembly Bill 32 (2006)	Requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020
Senate Bill 32 (2016)	Requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.
Senate Bill 375 (2008)	The California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS). Current targets for the State's largest MPOs call for a 19 percent reduction in GHG emissions from cars and light trucks from 2005 emissions levels by 2035.
Executive Order B-30-15 (2015)	Requires a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
Executive Order S-3-05 (2005)	Sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.

Legislative Mandates/ State Policies	Description of Thresholds
Executive Order B-16-12 (2012)	Specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.
Executive Order B-55-18 (2018)	Requires an additional statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and maintaining net negative emissions thereafter. It states, "The California Air Resources Board shall work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal."
Senate Bill 391	Requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050.
California Air Resources Board Mobile Source Strategy (2016)	Describes California's strategy for containing air pollutant emissions from vehicles and quantifies VMT growth compatible with achieving state targets.
The California Air Resources Board's *2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target*	Describes California's strategy for containing GHG emissions from vehicles and quantifies VMT growth compatible with achieving state targets.

Transit Operations

The City does not have any intercity transit lines but is served by other public transit services; Kern Transit provides inter-community bus services, whereas Dial-a-Ride (DAR) serves within the City boundary. Due to the limited transit services and automobile-centric characteristics of McFarland, only about 0.7% or 34 residents commute by transit to work. However, approximately 15% of residents carpool to their workplaces, which indicates an opportunity for mode-shift to transit from private automobiles. The following subsections explain the two existing public transits in detail.

Dial-a-Ride

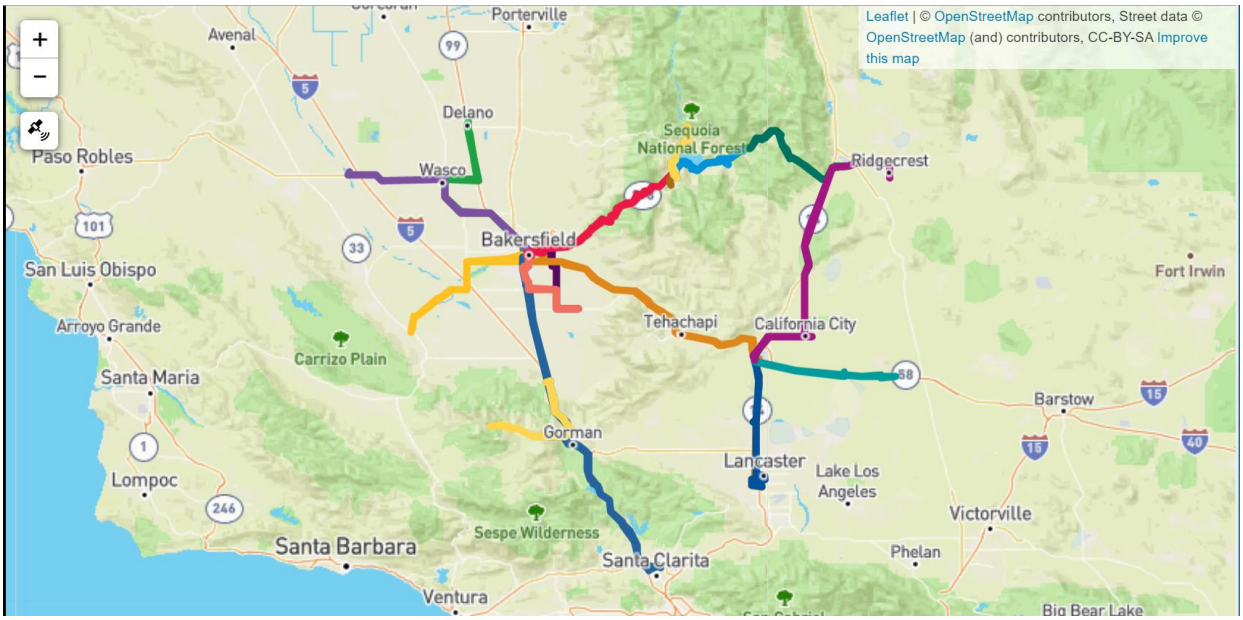
Dial-a-Ride is a demand-responsive transit service for both the public and people with disabilities. This transit service is funded by a combination of various funding sources such as Farebox Revenue, Federal Transit Administration (FTA) Section 5311, California Transportation Development Act (TDA), Low Carbon Transit Operations Program (LCTOP), and Public Transportation Modernization, Improvement, and Service Enhancement Account (PTMISEA) program by the Kern Council of Governments (Kern COG). DAR is also provided at $1 for adults and $0.50 for seniors and children over the age of 3 years. However, despite government funding, the service is limited in terms of service area, employees, and hours of operation.

The 2015 Transit Development Plan (TDP) notes that the service area is limited to the City boundaries, and there are only two assigned DAR drivers who work in staggered schedule. The hours of operation are Monday through Friday from 8:00 AM to 4:15 PM, which reveals that residents without automobiles need to find other means of transportation after operation hours. The TDP reports adult ridership at 45.8%, youth ridership at 26.7%, and senior and people with disabilities ridership at 10.7%. This indicates potential public ridership for fixed intercity bus service.

Kern Transit

Kern Transit Route 110 connects McFarland with Delano in North and Wasco and Bakersfield in the South. As shown in the Map 4.16-2, the bus runs along the Highway 99 and stops at the McFarland Community Center on Sherwood Avenue. Map 5-3 from Kern Transit (2019) shows that the Route 110 transit riders can either transfer at Wasco station to reach Lost Hills or Bakersfield central station to reach other parts of Kern County. The frequency and hours of operation of the transit are higher and longer on weekdays than on weekends; the buses run on one-to two-hour intervals until late afternoon on weekdays and every four hours until early afternoon on weekends. The TDP assumes that the purpose of intercity commutes mainly consists of accessing services that are absent in McFarland such as higher education, medical services, and social services.

MAP 4.16-2: EXISTING KERN REGIONAL TRANSIT LINES, 2019



Source: Kern Transit

Rail

There is no passenger rail service available in McFarland. However, the Amtrak San Joaquin line connecting Bakersfield to Oakland and Sacramento runs through a station platform in Wasco (13 miles to the southwest), as well as through a full-service station in Bakersfield (25 miles to the southeast). Six northbound and southbound trains serve this line daily. The Amtrak stations are accessible to McFarland residents via private vehicle and the North Kern Express bus.

The trains run on the Burlington Northern and Santa Fe (BNSF) railroad. Future expansion of Amtrak to McFarland and other cities in the region was suggested in the 2012 Kern Commuter Rail Study. This suggestion is reiterated here considering anticipated population growth in the area.

The Union Pacific Railroad also operates a freight rail service through the City, as does BNSF, although freight is received at Burlington Northern terminals in Wasco and other locations outside of McFarland. However, Union Pacific has expressed interest in giving McFarland permission to construct a rail on-ramp for freight loading, which could be an opportunity for local economic development. Trucking is the primary form of freight transport into and out of McFarland.

The railroad tracks through McFarland run alongside Highway 99 and do not intersect with vehicle traffic nor with active transportation traffic.

Pedestrian Network

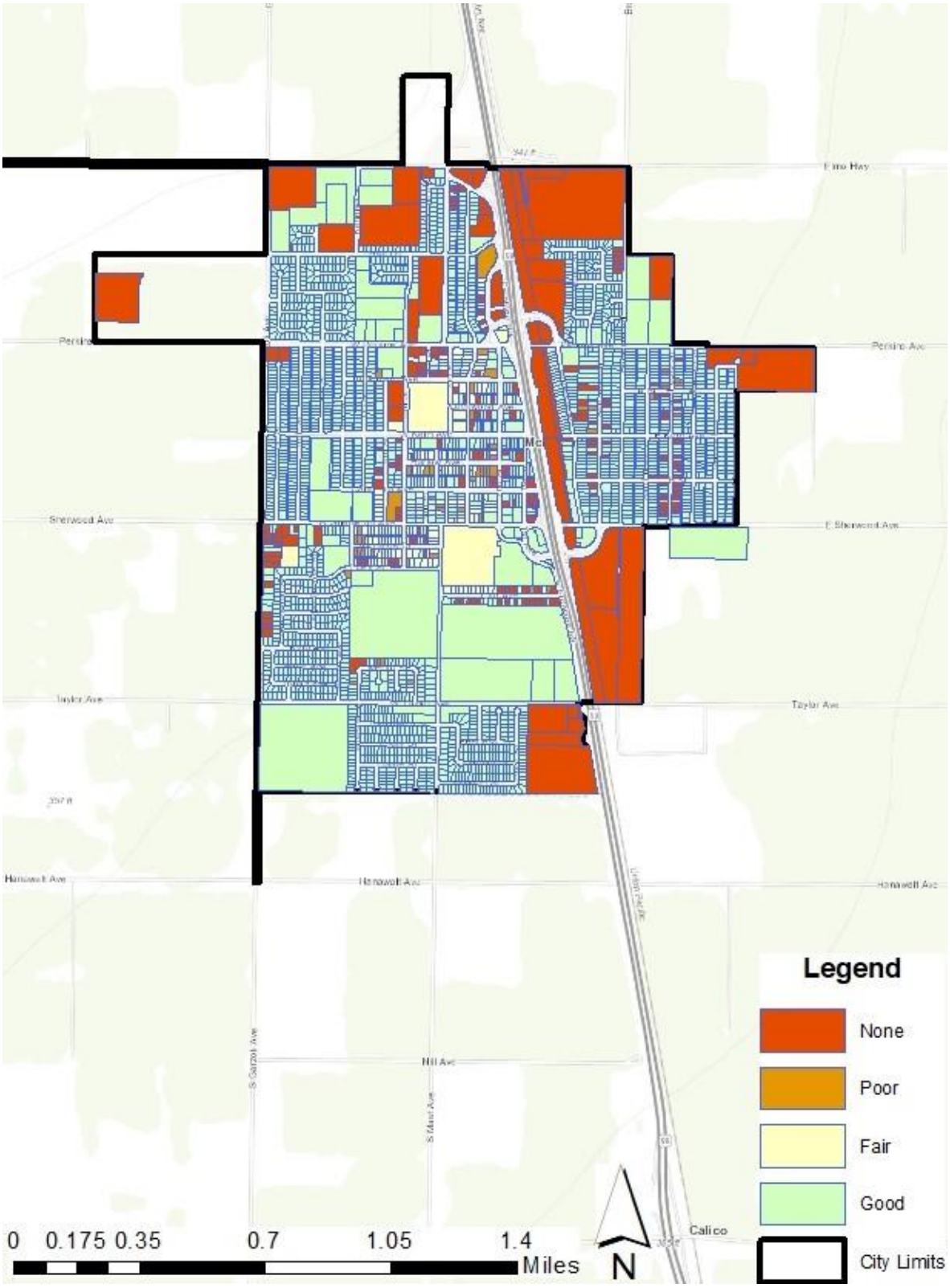
As shown in Map 4.16-3, most residential parcels have adequate sidewalk conditions and relatively few have poor to no sidewalks. Most of the parcels without sidewalks include agricultural fields and vacant lots in the central part of the City, however. From the land use inventory, it is found that most sidewalks have a minimum width of 4 feet as required by the Americans with Disabilities Act (ADA). There are also few to no obstructions on the sidewalks. Although the sidewalks are in good condition overall, the 2017 ACS reports that only about 0.6% of residents walk to their workplaces. To encourage walking for short distance trips, the City can improve the existing pedestrian facilities by providing aesthetically pleasing walking environments with amenities such as landscaping, shade, and benches.

Bicycle Network

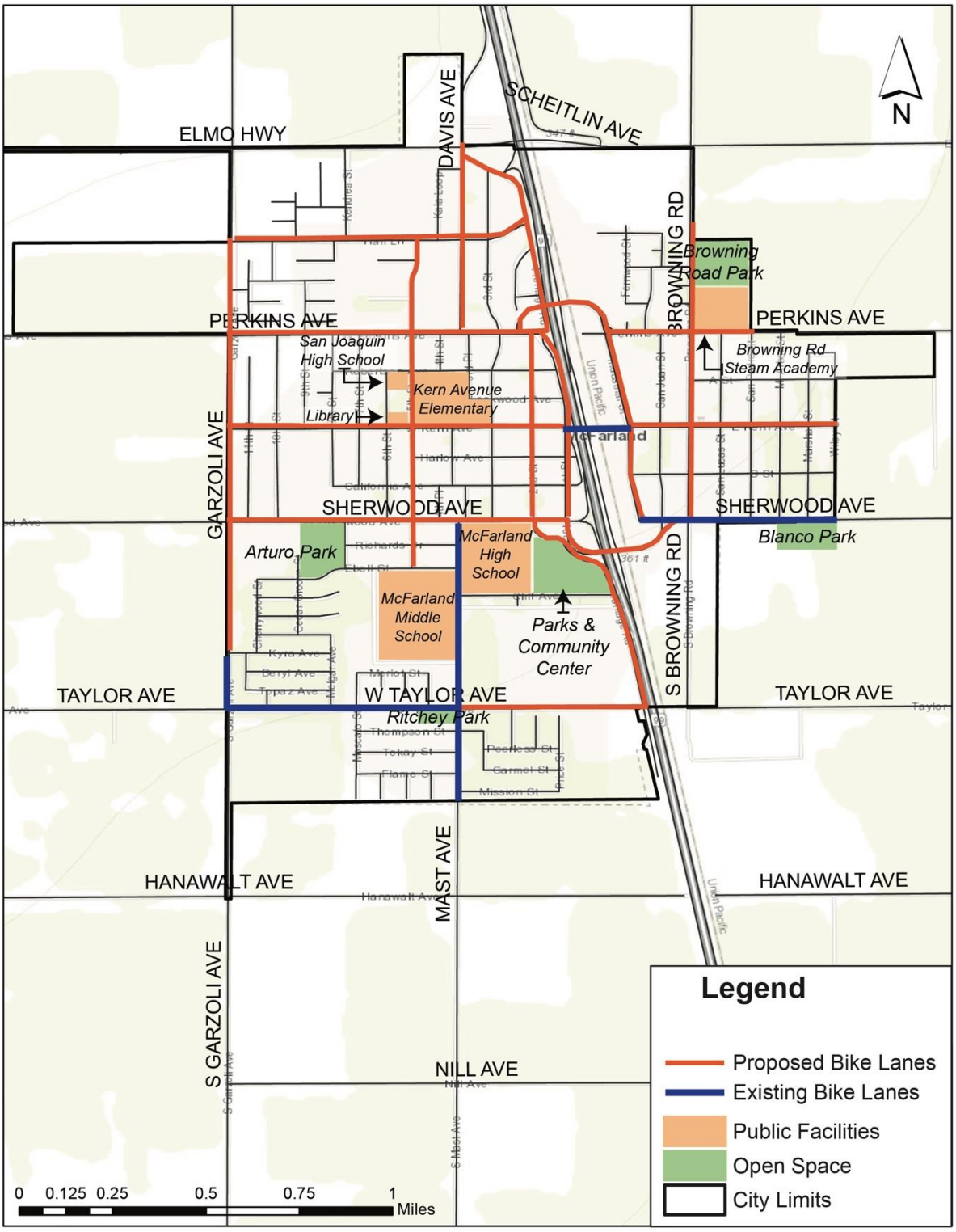
Existing Network

McFarland has only two segments with Class II or striped bike lanes, one on Garzoli Avenue and one on Mast Avenue as shown in Map 4.16-4. The bike lane on Garzoli Avenue runs only on the northbound side of the street for about 1/10 of a mile, from Kyra Avenue to Taylor Avenue. Similarly, the bike lane on Mast Avenue is also installed only on the northbound side for about 3/10 of a mile, from Taylor Avenue to Cliff Avenue. The two existing Class II bike lanes are only provided at short distances and do not connect to any activity centers in the City.

MAP 4.16-3: EXISTING SIDEWALK CONDITIONS IN MCFARLAND



MAP 4.16-4: EXISTING BIKE LANES IN MCFARLAND



Proposed Bikeway Network

The bikeways proposed in Map 4.16-4 would provide a complete bicycle network and connect frequently visited destinations within the City such as parks, schools, and commercial establishments. The selected corridors are wide enough to have bike lanes installed without disrupting the traffic flow.

Parking Conditions

Nearly all public parking in McFarland is on-street parking. The City has one public parking lot at Perkins Avenue and Frontage Road, which is not highly utilized. While parking supply is adequate for the City's needs, parking availability near employment, education centers, and other destinations remains an area for improvement.

4.16.2 Standards of Significance

4.16.2.1 CEQA Thresholds

Appendix G of the CEQA guidelines asks the following in regard to significant impact thresholds for Transportation & Traffic – whether buildout of the Plan would:

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) . . . . i.e., whether VMT is exceeding an applicable threshold of significance;
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
4. Result in inadequate emergency access.

4.16.2.2 Roadway and intersection traffic operations

4.16.2.3 Methodology

In December 2018, the California Natural Resources Agency certified and adopted new CEQA Guidelines, including Guidelines to implement Senate Bill 743 (§ 15064.3). SB 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing the criteria, OPR took guidance from the general principles contained within CEQA, the CEQA Guidelines, and applicable case law.

From July 2020, development proposals in California are to base impact analysis on vehicle miles travelled (VMT) reduction. OPR has therefore developed a Technical Advisory on Evaluating Transportation Impacts

in CEQA, which contains OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Lead agencies for projects (including General Plans) rely on "thresholds of significance." in the determination of significance. The CEQA Guidelines define a "threshold of significance" to mean "an identifiable quantitative, qualitative, or performance level of a particular environmental effect". "Non-compliance" means the effect is determined to be significant by the agency. And "compliance" means the effect is determined to be less than significant. (CEQA Guidelines, § 15064.7, subd. (a).) The VMT metric attempts to support the following three statutory goals (Pub. Resources Code, § 21099, subd. (b)(1)):

1. "the **reduction of greenhouse gas emissions**,
2. the **development of multimodal transportation networks**, and
3. a **diversity of land uses**."

OPR Guidelines further acknowledge the possibility of using any one of three methods to assess VMT. **Trip-based** and **tour-based** assessments may be used as measures of transportation efficiency in terms of such metrics as VMT per capita, per employee, or per person. A third method, estimating the **change in total VMT** with and without the project, attempts to evaluate whether a project is likely to divert existing trips, and what the effect of those diversions could be on total VMT. This method answers the question, "What is the net effect of the project on area VMT?" This is the method used in this analysis to assess daily VMT per capita.

The analysis addresses the full area over which the alternatives are likely to affect travel behavior including where the effect on travel behavior crosses political boundaries. We applied research, data, and sketch planning tools via spreadsheet models to calculate and estimate daily VMT. The Appendix to section 4.16 includes additional details. The models were designed to be sensitive to such features of the project alternatives as types and location of land uses, mixture of uses, proximity to public transportation, and opportunities for non-motorized travel. The tools assisted in estimating daily VMT reduction attributable to the General Plan project in comparison with existing conditions and future conditions under alternative growth scenarios.

OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so. Various legislative mandates and state policies establish quantitative greenhouse gas emissions reduction targets. Table 4.16-1 shows various targets.

The California Air Resources Board (CARB) recognizes that meeting the targets listed in Table 4.16-1 will require substantial reductions in existing VMT per capita to curb GHG emissions and other pollutants. But targets for overall GHG emissions reduction do not translate directly into VMT thresholds for individual projects for many reasons. CARB's First Update to the Climate Change Scoping Plan explains that achieving California's long-term criteria pollutant and GHG emissions goals will require four strategies to be employed:

1. **improve vehicle efficiency** and develop zero emission technologies,
2. **reduce the carbon content** of fuels and provide market support to get these lower-carbon fuels into the marketplace,

3. plan and build communities to **reduce vehicular GHG emissions** and provide more transportation options, and
4. **improve efficiency and throughput** of existing transportation systems.

CARB's 2018 Progress Report on California's Sustainable Communities and Climate Protection Act states on page 28 that "California cannot meet its climate goals without curbing growth in single-occupancy vehicle activity." In other words, vehicle efficiency and better fuels are necessary, but insufficient, to address the GHG emissions from the transportation system. Land use patterns and transportation options also will need to change to support reductions in vehicle travel/VMT. Therefore, targets for overall GHG emissions reduction would not translate directly into VMT thresholds for individual projects for many reasons including the following:

- Some, but not all, of the emissions reductions needed to achieve those targets could be accomplished by other measures, including increased vehicle efficiency and decreased fuel carbon content.
- New land use projects alone will not sufficiently reduce per-capita VMT to achieve those targets, nor are they expected to be the sole source of VMT reduction.
- Interactions between land use projects, and between land use and transportation projects, existing and future, together affect VMT.
- Because location within the region is the most important determinant of VMT, in some cases, streamlining CEQA review of projects in travel efficient locations may be the most effective means of reducing VMT.
- When assessing climate impacts of some types of land use projects, use of an efficiency metric (e.g., per capita, per employee) may provide a better measure of impact than an absolute numeric threshold. (Center for Biological Diversity, supra.)

4.16.3 Impact Discussion

TRANS – 1 Buildout of the proposed Plan would result in a LESS-THAN-SIGNIFICANT conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

All development under the proposed Plan would be subject to policies, plans, and programs that ensure the performance and safety of users of multiple modal facilities including public transit riders, bicyclists, and pedestrians. For example, all development under the proposed Plan would have to comply with the Complete Streets Act of 2008 and the Americans with Disabilities Act of 1990. The impact of the proposed Plan on adopted policies, plans, or programs would therefore be less than significant. The following policies under the proposed Plan demonstrate its compliance.

Policy CIR 1.1.2: Prioritize funding to improve and maintain pedestrian infrastructure for users.

Program CIR 1.1.2.1: Adapt Complete Streets Guidebook for local use.

Program CIR 1.1.2.2: Comply with the Americans With Disabilities Act of 1990 standards for sidewalk widths, grades, curbs, and corner ramps.

Program CIR 1.2.1.1: Establish separated bike lanes on Garzoli Avenue, Mast Avenue, Sherwood Avenue, Kern Avenue, and Browning Road to connect McFarland's southern neighborhoods with its downtown, eastern, and northern neighborhoods.

Policy CIR 1.3.1: Develop traffic calming strategies in accordance with accepted traffic standards.

Program CIR 1.3.1.1: Implement traffic calming strategies deemed as necessary from traffic studies at select locations to include raised crosswalks, speed tables, or pedestrian flashing beacons.

Policy CIR 1.4.1: Develop a "Safe Routes to School" initiative.

Program CIR 1.4.1.1: Map safe pedestrian and bicycle routes to schools in McFarland.

Policy CIR 1.5.1: Improve safety for pedestrian and bicyclists at all intersections and/or corridors with a history of collisions.

Program CIR 1.5.1.1: Develop and implement traffic strategies that reduce accidents.

Policy CIR 2.2.1: Implement a balanced, multi-modal transportation network in accordance with Complete Street requirements.

Program CIR 2.2.1.1: Update the City's street and subdivision standards to include Complete Streets strategies.

Applicable Regulations:

California Complete Streets Act of 2008 (AB 1358)

Americans with Disabilities Act of 1990

Significance Before Mitigation: Less than significant

TRANS – 2 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN A **LESS-THAN-SIGNIFICANT** CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES SECTION 15064.3, SUBDIVISION (B)? . . . . I.E., WHETHER VMT IS EXCEEDING AN APPLICABLE THRESHOLD OF SIGNIFICANCE.

Potential growth and development as a result of the proposed Plan can increase total vehicle miles travelled (VMT). However, the Plan's focus on infill and compact density as well as alternative, non-motorized travel can help to reduce VMT. Consistent with statewide thresholds of significance, the proposed McFarland General Plan is assessed to produce upwards of a 50 percent reduction in per capita VMT. This is possible because the General Plan includes certain improvements to transportation and land use settings, which are projected to result in lower per capita VMT than existing and other future alternatives including the no project alternative. The improvements include the following:

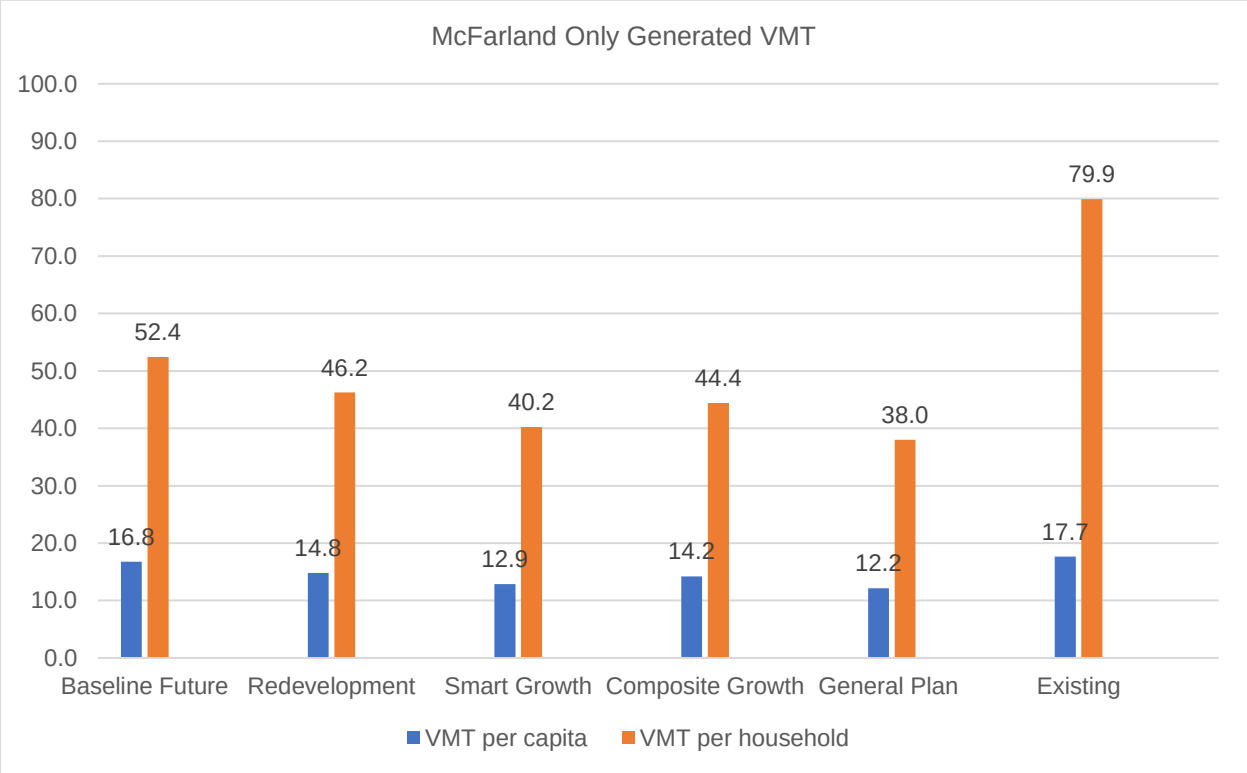
1. **Implementations of land use mix**. The Plan proposes a commercial corridor along Kern Avenue on the east side of downtown, commercial streets in the downtown area, and a mixed-use corridor on the east of Mast Avenue between Nill Avenue and Whisler Road.
2. **Allocation of residential land uses in proximity to public transit**. The Plan proposes citywide distribution of transit stops in commercial and residential neighborhoods as well as major employment centers.
3. **Expansion in opportunities for non-motorized travel such as bicycle and pedestrian connectivity**. The Plan proposes bicycle and pedestrian routes along major corridors citywide.
4. **Increasing intensity of development.** This is to occur with accessory dwelling units (ADU) and higher density residential developments in areas west, south, and east of downtown.

VMT Comparison uses VMT figures retrieved from the California Statewide Travel Demand Model (CSTDM) for TAZ 2949, which includes the City of McFarland as well as its Sphere of Influence. "Baseline" refers to the "no plan" alternative, which is an extrapolation of historic trends. The "existing baseline" is for the year 2010. Similarly, per capita VMT for the "baseline future" condition was also retrieved for TAZ 2949 from the California Statewide Travel Demand Model (CSTDM) for 2040. As Table 4.16-2 and Figure 4.16-1 show, the General Plan alternative is expected to generate the lowest per capita VMT of 12.2, which is 5.5 VMT lower than "existing" conditions and 4.5 VMT lower than the "future baseline". Notably, the "future baseline" is anticipated to reduce the least amount of per capita VMT from "existing" at 0.9 VMT.

TABLE 4.16-2: VEHICLE MILES TRAVELED (VMT) COMPARISON

	Existing	Baseline Future	Redevelopment	Smart Growth	Composite Growth	General Plan
Per Capita VMT	17.7	16.8	14.8	12.9	14.2	12.2
Reduction in VMT from Existing	-	0.9	2.9	4.8	3.5	5.5

FIGURE 4.16-1: VEHICLE MILES TRAVELED (VMT) COMPARISON



OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so. Various legislative mandates and state policies establish quantitative greenhouse gas emissions reduction targets as listed in Table 4.16-1. These levels of baseline reduction in VMT are below the greenhouse gas reduction thresholds implicit in Table 4.16-1.

All of the policies and programs in the proposed Plan are aimed at reducing VMT; below are some of the most specific examples of such goals.

Objective CIR 1.5: Provide a supportive environment for active transportation users.

Objective CIR 3.1: Reduce Vehicle Miles Traveled (VMT).

Policy CIR 3.1.1: Implement vehicle miles travel reduction strategies.

Program CIR 3.1.1.1: Develop and adopt VMT reduction strategies to meet state standards.

Program CIR 3.1.1.2: Place jobs and services close to housing to reduce vehicle usage and community wide VMT.

Objective CIR 3.2: Increase pedestrian and bicycle mode share.

Policy CIR 3.2.1: Expand access to non-motorized transportation.

Program CIR 3.2.1.1: Seek and prioritize funds for pedestrian and bicycle-friendly streets projects.

Applicable Regulations:

SB 743

AB 32

SB 32

SB 375

Executive Order B-30-15

Executive Order S-3-05

Executive Order B-16-12

SB 391

California Air Resources Board Mobile Source Strategy (2016)

The California Air Resources Board's 2017 Climate Change Scoping Plan Update

Significance Before Mitigation: Less than significant

TRANS – 3 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN NO IMPACT AS IT WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT).

All development under the proposed Plan would be subject to design and safety standards that are specified within the City of McFarland Municipal Code. The City of McFarland Municipal Code references, and is subject to, codes established by the State of California that ensure the safety of its citizens. As with current practice, all future roadways would be designed and reviewed in consultation with engineers to determine their compliance with these codes and regulations with regard to hazards and incompatible uses.

Applicable Regulations:

City of McFarland Municipal code

Significance Before Mitigation: No impact

TRANS – 4 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN NO SIGNIFICANT IMPACTS TO ADEQUACY OF EMERGENCY ACCESS.

All development under the Plan would be subject to design and safety standards, specified under the City of McFarland Municipal Code, which references the California Building Code and portions of the International Fire Code. As with current practice, all future roadways would be designed and reviewed in consultation with engineers to determine their compliance with these codes and regulations with regards to adequate emergency access. The proposed Plan contains the following programs to ensure adequate emergency access.

Program SAF 4.2.1.1: Plan emergency event evacuation in coordination with county, state, and federal agencies.

Program SAF 4.2.1.2: Establish procedures for safe, prompt, and orderly evacuation, locations of safe meeting areas, emergency supplies including food, water, and medical supplies, and general emergency protocols.

Policy SA4.2.2: Educate the public about emergency response procedures.

Program 4.2.2.1: Provide residents and businesses with information about local safety hazards and emergency plans, including evacuation plans and procedures to accommodate special needs populations and efficient post-disaster recovery.

Objective 4.3. Improve emergency access and circulation.

Policy 4.3.1. Reduce danger to life.

Program 4.3.1.1: Map all emergency response facilities and accessways.

Program 4.3.1.2. Assess risk from evacuation and emergency response bottlenecks for hazards, particularly fire, flood, and hazardous materials.

Program 3. Develop, prioritize, and implement improvement measures for all bottlenecks considered high risk.

Applicable Regulations:

City of McFarland Municipal Code

Significance Before Mitigation: Less than significant

4.16.4 Summary of Potential Impacts and Mitigation Measures

Mitigation measures are not necessary, as the proposed Plan will not result in any potentially significant impacts to Transportation.

4.17 Utilities and Service Systems

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?		X		
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?		X		
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has (in)adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		X		
4. 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?		X		

5. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	X

Utilities and Service Systems are critical community facilities that affect the functioning, safety, wellbeing, public health, and general standards of living of the public. This section covers utility facilities, water supply, wastewater capacity, and solid waste management in the City of McFarland.

This section has some overlap with other sections of this EIR such as Public Facilities, Hydrology, and Energy. The discussion involves an examination of the overall adequacy, safety, and conditions of facilities in the City of McFarland. In addition to the introspective look at facilities to examine existing conditions and capacities, the discussion also includes assessment of potential of the facilities to keep up with projected growth.

4.17.1 Environmental Setting

This section describes the existing conditions of individual Utilities and Service Systems located within the City of McFarland. Subsequent sections discuss the potential impacts of build-out of the proposed Plan to Utilities and Service Systems.

Water System and Service

This section describes the existing condition and availability of water resources. This section focuses on provision of water resources, further information can be found in Section 4.9 'Hydrology and Water Quality'.

Regulatory Framework

This section discusses federal and State regulations and programs related to provision of water services.

Federal Regulations

U.S. Environmental Protection Agency - Federal Safe Drinking Water Act (SDWA)

The U.S. Environmental Protection Agency (EPA) sets drinking water standards for local jurisdictions to meet. All water providers, except wells serving less than 25 people, must meet the standards set forth by the SDWA. These standards are met by removing all contaminants, natural and human caused. At the local level, the Central Valley Regional Water Quality Control Board (CVRWQCB) regulates safe drinking water.

State Regulations

State Water Resources Control Board

California Porter-Cologne Water Quality Control Act

The California Porter-Cologne Water Quality Control Act, passed in 1969, gave authority to the State Water Resource Control Board to govern water quality and water rights in the State. This statute also established the Regional Water Quality Control Boards to monitor and assess local and regional water quality in day-to-day operations. It is the role of the Regional Water Control Boards to regulate discharges that have potential effects on local surface and/or groundwater.

Executive Order B-29-15

Executive Order B-29-15 was put out by Governor Brown as a response to the ongoing drought conditions in the State. The Order requires a statewide reduction in potable urban water use of 25 percent between June 2015 and February 2016. "To reach the statewide 25 percent reduction mandate, the emergency regulation assigns each urban water supplier (serving more than 3,000 connections) a conservation standard that ranges between 4 percent and 36 percent based on their residential gallons per capita per day (R-GPCD) for the months of July-September 2014" (State Water Resources Control Board [SWRCB], 2015a, p. 1). Overall, the statewide 25 percent reduction goal corresponds to 1.2 million acre-feet of water over nine months (SWRCB, 2015a, p. 1). Water suppliers are also required to notify customers about leaks that are within the customer's control, and report on water use, compliance, and enforcement (SWRCB, 2015a, p. 2).

California Department of Water Resources

California Groundwater Management Act

AB 3030 offers direction to local agencies in creating voluntary Groundwater Management Plans in designated groundwater basins. These plans have the authority to finance basin management by increasing revenue. In 2014, the California legislature passed the California Groundwater Management Act, which will supersede AB 3030, but will not go into effect until 2017.

California Sustainable Groundwater Management Act

The California Sustainable Groundwater Management Act and its component bills: AB 1739, SB 1168, and SB 1319, provide specific authority to a groundwater sustainability agency to impose fees and provide technical assistance to entities that extract or use groundwater. Best management practices will be published by January 1st, 2017. SB 1168 expands the relevant information in groundwater plans to include adverse impacts on local habitat and local stream flows. All high and medium priority basins subject to critical conditions of overdraft are to be managed under a groundwater sustainability plan by January 31st, 2020, and all other high or medium priority basins must be managed by a groundwater sustainability plan by January 31st, 2022.

Senate Bill 610 and 221 (SB 610 and 221)

SB 610 and 221 were passed in 2001 to address the Urban Water Management Planning Act, which SB 610 amended. SB 221 references both the Urban Water Management Plan and the Urban Water Shortage Contingency Analysis. Both SB 221 and SB 610 ensure adequate water supplies to California's communities though coordination of local water supply and land use decisions. SB 610 requires local water assessments for inclusion under CEQA (California Environmental Quality Act) for certain projects defined by Water Code 10912. Consequently, under SB 221, local approval of certain subdivisions requires official verification of adequate water supply.

State Updated Model Landscape Ordinance (AB 1881) AB 1881 amends AB 325, the Water Conservation in Landscape Act of 1990. AB 325 required the California Department of Water Resources to implement a Model Ordinance stating that "landscape design, installation, and maintenance can and should be water efficient" (DWR, 2015a). AB 1881 requires the DWR to update the model ordinance in accordance with the Water Smart Landscapes for California (2005) report.

California Sustainable Groundwater Management Act

The California Sustainable Groundwater Management Act and its component bills: AB

1739, SB 1168, and SB 1319, provide specific authority to a groundwater sustainability agency to impose fees and provide technical assistance to entities that extract or use groundwater. Best management practices will be published by January 1st, 2017. SB 1168 expands the relevant information in groundwater plans to include adverse impacts on local habitat and local stream flows. All high and medium priority basins subject to critical conditions of overdraft are to be managed under a groundwater sustainability plan by January 31st, 2020, and all other high or medium priority basins must be managed by a groundwater sustainability plan by January 31st, 2022.

The Water Conservation Act of 2009 (Senate Bill X7-7)

Senate Bill X7-7 requires all water suppliers to increase efficiency. "The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015" (California Department of Water Resources). If urban water suppliers do not meet the goals by 2016, they will not be eligible for State water grants or loans.

State Updated Model Landscape Ordinance (AB 1881)

AB 1881 amends AB 325, the Water Conservation in Landscape Act of 1990. AB 325 required the California Department of Water Resources to implement a Model Ordinance stating that "landscape design, installation, and maintenance can and should be water efficient" (California Department of Water Resources, 2010). AB 1881 requires the Department of Water Resources to update the model ordinance in accordance with the Water Smart Landscapes for California (2005) report.

California Department of Housing and Community Development

Water and Sewer Service Priority for Housing Affordable to Lower-Income Households

(SB 1087)

Under SB 1087, local governments must coordinate housing stock and water supply by requiring jurisdictions to provide the adopted housing element to the local water and sewer providers. Service providers must grant priority to proposed development that includes affordable units for lower-income households.

Local Regulations

City of McFarland Municipal Code

The standards for McFarland are outlined in Chapter 13.04 of the City's municipal code. Article III outlines well standards, with sections concerning location, construction, disinfection and sanitary requirements, and water quality testing.

Article IV provides standards for domestic water supply systems, including permitting, design and construction, domestic water quality monitoring, backflow prevention, and operation and maintenance.

Kern County Public Works Department

The Kern County Public Works Department also maintains standards concerning water systems. These standards can be found in Division Two of the County's development standards. Division Two outlines County requirements for water supply, piping, fittings, service connections, storage facilities, and testing.

Existing and Baseline Conditions

The City of McFarland maintains and operates a domestic water system within the City. The system includes four water wells and a storage tank.

McFarland's peak source capacity is 7,300 gallons per minute with an approximate annual consumption of 1,825-acre feet. The maximum daily water use is estimated as 11,028 cubic feet per second and peak demand is estimated at 7.43 million gallons per day. There are four wells within the City of McFarland. The City of McFarland collects fees to pay for quality testing and infrastructure improvements, and the water is used for both residential and commercial water uses, as well as for firefighting uses. The wells depths have lowered over time resulting in a slight decline in water quality. There are present concerns about the water quality of these wells. A quality test from 2016 showed positive for arsenic and coliform. A consumer confidence report conducted in 2018 reported two violations in water quality, one for 1,2,3 Trichloropropane, and the other for a total coliform rule reporting violation. Water levels and quality are important to monitor to maintain safe water sources for the community. Maintaining an adequate water supply is also important as related to population growth and the planned future expansions of the City.

Sewer System and Service

This section discusses federal and State policies and regulations regarding wastewater and sewer services.

Regulatory Framework

Federal Regulations

U.S. Environmental Protection Agency

The Clean Water Act (CWA)

Under the Clean Water Act, it is illegal to discharge any pollutant from a point source into navigable waters without an NPDES permit. According to the EPA: “point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters" (2015).

The National Pollution Discharge Elimination System (NPDES)

The National Pollution Discharge Elimination System (NPDES) program is implemented locally by the Central Valley Regional Water Quality Control Board on behalf of the Environmental Protection Agency. The NPDES program is administered via Section 402(p) of the Federal Clean Water Act and aims to reduce pollution from point sources into stormwater discharge. Permits are often required for projects discharging into lakes, streams, or other water bodies. Construction permits are required for projects disturbing more than one acre. Permits require elimination or reduction of non-stormwater discharges into stormwater systems or other waters of the United States and the development, implementation, and monitoring of a Storm Water Pollution Prevention Plan (SWPPP).

State Regulations

State Water Resources Control Board

All public sewer collection systems with more than one mile of pipe must adhere to the General Waste Discharge Requirement (Order No. 2006-0003). This order requires that public operators control the volume of waste discharged by all feasible methods, to prevent sewer waste from entering the storm sewer system, and to create a Sewer System Management Plan (SSMP). Furthermore, the order also requires storm sewer overflows to be reported to the California State Water Resources Control Board. Locally, the California State Water Resources Control Board delegates authority to the Central Coast Regional Water Quality Control Board.

California Department of Housing and Community Development - Water and Sewer Service Priority for Housing Affordable to Lower-Income Households

SB 1087

Under SB 1087, water and sewer requirements for developments that include affordable housing to lower-income households must be given priority via adopted written policies. Water and sewer providers are prohibited from denying, adding conditions to approval, or reducing the level of service to proposed development applications which include affordable housing for lower-income households.

Local Regulations

City of McFarland Municipal Code

Standards concerning sewer systems are determined by the City of McFarland and Kern County. The standards for McFarland are outlined in Chapters 13.08 and 13.12 of the City's municipal code. Chapter 13.08 outlines requirements for duties and permits to connect, inspection of work, and violations and penalties.

Chapter 13.12 covers Sewer Use Regulations and Charges, which aims to provide for the maximum possible beneficial public use of the City's facilities through adequate regulation of sewer construction, sewer use and industrial wastewater discharges, to provide equitable distribution of the City's costs, to provide for the setting of sewer use charges for various classifications of sewer users, and to provide procedures for complying with requirements placed upon the City by other regulatory agencies.

Kern County Public Works Department

The Kern County Public Works Department also maintains standards concerning sewer systems. These standards can be found in Division Three of the county's development standards. Division Three outlines design standards, materials and installation, and standards for the separation of water and sewer lines. Chapter II covers design standards for sanitary sewers, including average and peak discharge, sewer velocity and quantities, maximum discharge, main location, sizing, and alignment. Chapter IV discusses materials and installations. Chapter V outlines standards for separation of water and sewer mains.

Existing and Baseline Conditions

The wastewater treatment plant for the City is on Elmo Highway and has a capacity of 1.55 million gallons per day and is processing an average monthly flow of 1.1 million gallons per day. There is also a planned expansion of the existing facility, to increase the daily capacity to 2.5 million gallons per day.

While the overall conditions of the City's sewer piping are generally sound, on the eastern side of town there is only an 8-inch pipe connecting the homes and businesses to the wastewater treatment plant. The City has been unable to expand the pipe capacity as it passes underneath Highway 99. There is a planned expansion of the wastewater treatment plant, but due to the pipe size limitation it would only increase capacity for the west side. Addressing the capacity issues on the eastern side of McFarland is of paramount concern for any residential, commercial, or industrial expansion within the City.

STORMWATER DRAINAGE SYSTEM

This section discusses the regulatory framework and existing conditions of storm water drainage in McFarland.

Regulatory Framework

Federal Regulations

U.S. Environmental Protection Agency

The National Pollution Discharge Elimination System (NPDES)

The National Pollution Discharge Elimination System (NPDES) program is implemented locally by the Central Valley Regional Water Quality Control Board on behalf of the Environmental Protection Agency. The NPDES program is administered via Section 402(p) of the Federal Clean Water Act and aims to reduce pollution from point sources into stormwater discharge. Permits are often required for projects discharging into lakes, streams, or other water bodies. Construction permits are required for projects disturbing more than one acre. Permits require elimination or reduction of non-stormwater discharges into stormwater systems or other waters of the United States and the development, implementation, and monitoring of a Storm Water Pollution Prevention Plan (SWPPP).

The Clean Water Act (CWA)

Under the Clean Water Act it is illegal to discharge any pollutant from a point source into navigable waters without an NPDES permit. According to the EPA, "point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters" (EPA, 2014).

State Regulations

There are no applicable state regulations.

Local Regulations

Kern County

Kern County has established standards for new and existing construction within the 100 or 500-year floodplains. Subdivisions are also required to create floodplain management plans when subdividing within the City of McFarland or the County of Kern. The methods and requirements for new and expanding stormwater systems are to be created through Kern County's Engineering and Works Department.

Existing and baseline Conditions

The City is using sump basins as their form of flood and storm control in the area, with existing and proposed locations shown in Map 16-1. There are nine existing lots that are owned by the City and serve as basins to hold and retain water until it can percolate into the ground. The City does not have street-level stormwater infrastructure, such as storm drains. Community members identified that this was a serious issue, particularly in the east side of town. One community member mentioned at the first community meeting that students at Browning Road Elementary School are often unable to cross the large puddles and require assistance from school staff. The existing Local Hazard Mitigation Plan from 2016 identified the need for a Poso Creek study and mentioned the risk that it can pose to residents. The Storm Drain Master Plan of 2015 identified three possible sump basin locations, one is within City limits and the other two directly to the south.

Solid Waste System and Service

This section discusses the regulatory framework and existing conditions of disposal of solid waste and the associated facilities in McFarland.

Regulatory Framework

This section discusses federal and State regulations and goals applicable to solid waste disposal.

Federal Regulations

U.S. Environmental Protection Agency -Resource Conservation and Recovery Act

The U.S. Environmental Protection Agency (EPA) has authority under the Resource Conservation and Recovery Act (RCRA) to control hazardous waste from "cradle to grave", i.e., from generation through disposal, including transportation, storage, and treatment. The RCRA sets guidelines for the management of non-hazardous solid waste.

State Regulations

California Department of Resources Recycling and Recovery (CalRecycle)

California Integrated Waste Management Act (AB 939)

The California Integrated Waste Management Act of 1989 originally required cities and counties to divert 50% of solid waste from landfills by January 1, 2000. AB 939 also set forth a goal for California Counties to provide at least 15 years of ongoing capacity. Under AB 939, cities and counties are required to prepare a Source Reduction and Recycling Element for CalRecycle. In 2007, SB 1016 amended AB 939 and established a per capita disposal measurement system. CalRecycle sets per capita targets. Diversion programs must be submitted in a report to CalRecycle annually. In 2011, AB 321 set a statewide goal of at least 75% of waste being diverted through reduction, recycling, or composting by 2020.

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act of 1991 gives authority to the California Integrated Waste Management Board (CIWMB) to construct a model ordinance which outlines provisions for adequate areas for collecting and loading recyclable materials for new development projects after September 1st, 1994. For subdivisions and single-family homes, recycling provisions only need to serve the needs within the subdivision.

Local Regulations

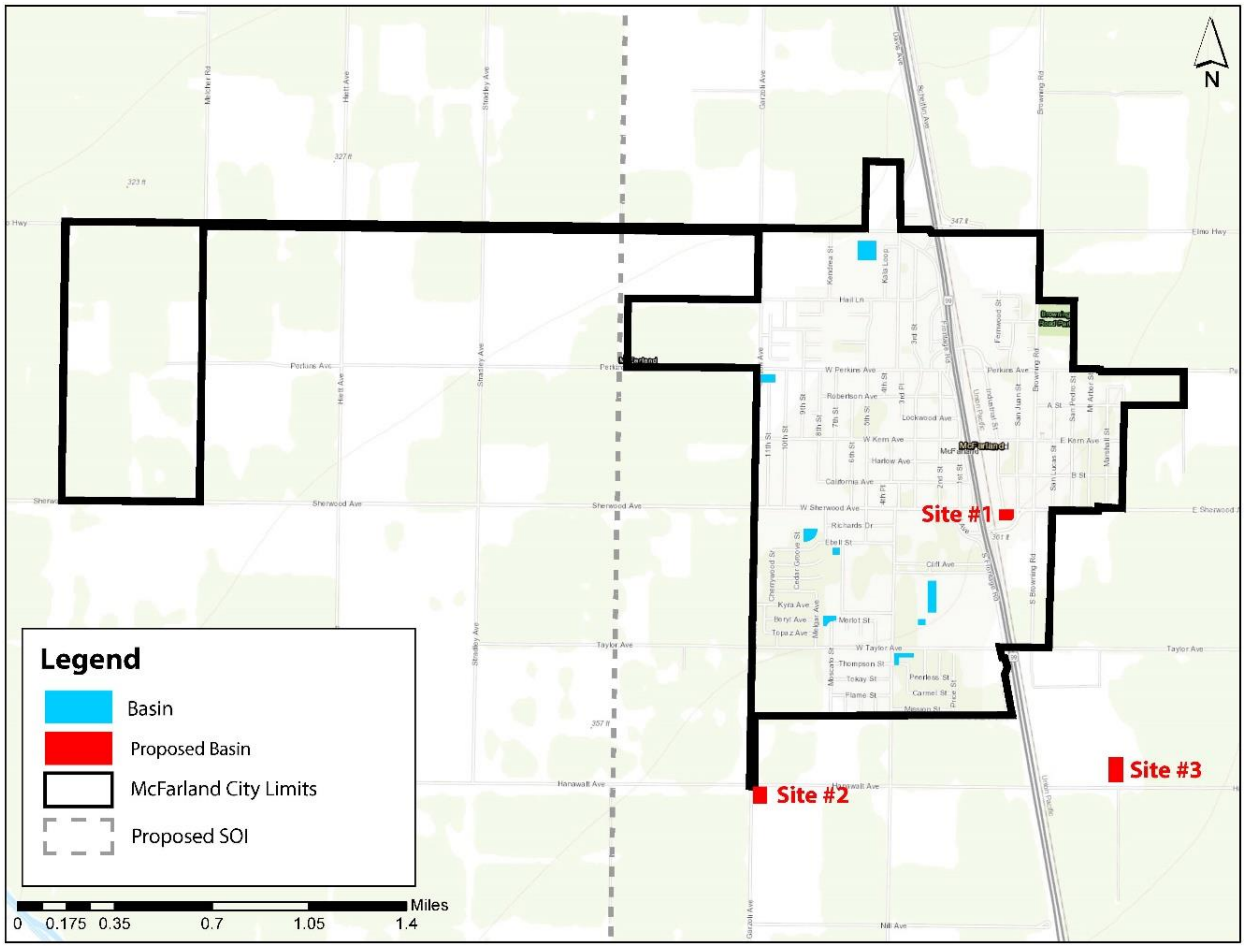
City of McFarland Municipal Code

Although solid waste collection services are provided by a private company, the City of McFarland has adopted standards concerning construction and demolition debris and garbage collection and regulation. Chapter 8.10 of the City's Municipal Code outlines the Mandatory Construction and Demolition Debris Recycling Program. Chapter 8.12 covers the standards for Garbage Collection and Regulation.

Existing and Baseline Conditions

The City's Refuse and Recycling Department oversees the management of the City's Solid Waste Plan. This department abides by AB 939 and AB 341 requirements and promotes waste reduction and recycling. R&F Disposal is in contract with the City to provide refuse and recycling services, and provides curbside service to the residents of McFarland, including blue recycling cans, green cans for yard waste, and black cans for non-recyclable waste. R&F Disposal and Recycling, Inc., has been owned by the Irizarry family since the start of the company in 1968, and is the exclusive franchise hauler for the City of McFarland and the City of Delano. R&F Disposal rents roll-off bins for use in collecting construction and demolition (C&D) materials, which are then taken to a processor to be recycled and reused. R&F Disposal operates a recycling center at 400 West Perkins Ave, and a drop-off location at 640 South Frontage St. The nearest landfill, Shafter-Wasco Landfill, is located at 17621 Scofield Road in the City of Shafter, approximately 13 miles from McFarland.

MAP 4.17-1: PROPOSED AND EXISTING SUMP BASIN LOCATIONS IN MCFARLAND



ENERGY SUPPLY AND SYSTEM

This section discusses Federal, State, and local regulations and goals applicable to energy.

Federal Regulations

There are no applicable federal regulations related to energy.

State Regulations

Warren-Alquist State Energy Resources Conservation and Development Act

In 1974, this act established what is now known as the California Energy Commission and enabled the Commission to adopt building energy standards. The California Legislature continues to update the act yearly to address pressing energy needs and issues.

California Code Of Regulations, Title 24, Part 6

This chapter serves as California's Energy Efficiency Standards for Residential and Non-residential Buildings. Title 24 was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. In 2010, the CEC updated Title 24 standards with more stringent requirements. The 2010 standards are expected to substantially reduce growth in electricity and natural gas use. Additional savings result from the application of the standards on building alterations, such as those within Section V (Site Lighting) including Subpart E (Windows), F (Roofs), and S (Mechanical Equipment). These savings are cumulative, increasing as years go by.

Local Regulations

City of McFarland Municipal Code

Although energy services are provided by a private company, the City of McFarland has adopted standards concerning energy use and regulation. Chapter 13.16 of the City's Municipal Code outlines the energy standards for underground facilities. Chapter 15.04 covers the Electrical Code and Energy Code.

Kern County General Plan Energy Element

The Kern County Energy Element is a comprehensive document which defines critical energy related issues facing the County and sets forth goals, policies, and implementation measures to protect the County's energy resources and encourage orderly energy development while affording the maximum protection for the public's health, safety, and the environment.

Existing and Baseline Conditions

Electrical Service

The City is located entirely within Southern California Edison's (SCE) service territory. SCE maintains and operates the transmission and distribution infrastructure necessary to provide electricity to end users within McFarland and throughout its entire service area.

Natural Gas

McFarland is located entirely within Southern California Gas Company's (SCG) service territory. SCGC natural gas service lines are currently provided to the project site.

4.17.2 Standards of Significance

4.17.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), the proposed Plan would have a significant effect on the environment with respect to Utilities and Service Systems if it would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has (in)adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
4. 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;
5. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.17.2.2 Methodology

This section explains the evaluation of the potential impacts to Utilities and Service Systems. It is based on projected service need and demand, CEQA guidelines above, conservation measures in relation to the current conditions and incorporates evaluation of the projections and potential improvements identified in the 2011 Municipal Services Review (MSR).

4.17.3 Impact Discussion

This section discusses the proposed Plan specific impacts related to City of McFarland library and public park service and facilities.

UTIL – 1 With Mitigation, buildout of the proposed Plan would result in **less-than-significant** adverse impacts regarding requiring the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

The proposed Plan will result in new growth and infrastructure development in key areas within the City of McFarland. This could result in new construction or expansion of storm water drainage facilities. The City does not have a history of major flood events, though it is possible that projected growth in the Plan could change this. It is necessary for the Plan to address infrastructure requirements in order to efficiently capture and divert storm water to reduce the risk of urban flooding for new development and growth. Proposed roadway expansion, land use changes and commercial growth and expansion could possibly increase the use of pavement and parking areas. Extension of electric, gas, and telecommunications facilities, and extension of wastewater lines. However, there is no anticipated need to relocate existing facilities. The proposed Plan includes the following programs and policies that can assist and/or impact storm water and drainage facilities in the proposed Plan.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Policy HO 1.3.1: Accommodate the City's housing need over the life of the General Plan.

Program HO 1.3.1.1: Expand housing to the west of the City away from floodable areas.

Policy SAF 2.2.1: Implement projects to strengthen flood control measures to reduce risk to life and property.

Program SAF 2.2.1.1: Identify flood control projects in hazard mitigation documents.
Program SAF 2.2.1.2: Prioritize flood control projects identified in the LHMP and Storm Drain Master Plan.
Program SAF 2.2.1.3: Identify possible funding sources and work with City grant writers to apply for state and federal funds to implement projects.
Program SAF 2.2.1.4: Continue to support efforts of the Bureau of Reclamation to ensure that proper maintenance and repairs of the Friant-Kern Canal are accomplished, along with other applicable agencies for flood control.

Policy SAF 2.2.2: Reduce flood risk for new development and critical infrastructure.
Program SAF 2.2.2.1: Prior to development, encourage flood risk assessment and possible mitigation measures to reduce risks to life and property.
Program SAF 2.2.2.2: Prohibit development in the 100-year flood plain unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.

Policy SAF 2.2.3: Protect essential facilities from flooding by implementing flood control measures and relocating facilities when needed.
Program SAF 2.2.3.1: Create an inventory of essential facilities which are at risk of flood damage within the 100- and 500-year flood plains.

Program SAF 2.2.3.2: Locate the construction of essential facilities outside the 500-year flood plain or ensure facilities are equipped to mitigate flooding to ensure long term operation.

Policy CON 1.1.1: Prioritize flood control projects identified in the Storm Drain Master Plan.

Program CON 1.1.1.1: Complete and implement the McFarland Storm Drain Master Plan by 2035, prioritizing improvement near East Perkins Avenue within the 100-year flood plain.

Program CON 1.1.1.4: Apply for the Urban Flood Protection Program to help offset the costs of upgrading current infrastructure.

Objective PF 1.2: Maintain and expand utility infrastructure for the City, prioritizing projects where capacity has been reached.

Policy PF 1.2.1: Avoid disproportionately burdening certain neighborhoods with construction or maintenance costs.

Program PF 1.2.1.1: Create a master plan for infrastructure improvements into the future.

Program PF 1.2.1.2: Distribute costs of large infrastructure improvement projects and services equitably.

Applicable Regulations:

The National Pollution Discharge Elimination System (NPDES)

Federal Clean Water Act

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

UTIL – 2 WITH MITIGATION, BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT IMPACTS IN REGARD TO HAVING SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE FUTURE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS.

The area has sufficient water supply to serve existing entitlements and resources, but the Plan does state that water supply can be a limiting factor in growth. Continuing to monitor water quality is important as the community continues to grow. The current water supply needs to be supplemented by additional sources and continuously monitored for quality to facilitate growth. Additionally, the City of McFarland needs to reduce its water demand regardless of these impacts. Executive Order B-37-16 and Senate Bill X7-7 mandate water demand reduction which can potentially help the City offset demand associated with projected growth.

The proposed Plan includes the following programs and policies that focus on water conservation and can assist or impact the water supply in adapting to population growth in the City of McFarland.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Policy SAF 2.4.1: Conserve water in all sectors.

Program SAF 2.4.1.1: Educate the community on water conservation practices.

Program SAF 2.4.1.2: Measure the success of current water conservation programs, prioritizing development of successful programs, and continually revise programs to meet water reduction goals.

Program SAF 2.4.1.3: Create new programs to promote efficient and responsible water use.

Program SAF 2.4.1.4: Enact new measures as needed according to protocols established by the Kern Water Authority.

Policy SAF 2.4.2: Invest in waterwise infrastructure.

Program SAF 2.4.2.1: Adapt existing green spaces in public areas to retain rainwater on site.

Policy SAF 2.4.3: Identify groundwater recharge locations where soil and geography allow for infiltration.

Program SAF 2.4.3.1: Pursue grants to aid long term groundwater recharge projects.

Program SAF 2.4.3.2: Examine proposed public infrastructure projects for potential water recharge opportunities.

Policy CON 2.1.2: Decrease water use in new and existing developments.

Program CON 2.1.2.1: Investigate the use of gray water irrigation systems in new developments.

Program CON 2.1.2.2: Use drip irrigation systems and drought tolerant or native vegetation in newly developed areas.

Program CON 2.1.2.3: Develop a plan to decrease water use in public landscapes by 25% of 2018 levels by 2035. Convert existing landscapes to drip systems and replace landscapes requiring significant irrigation with drought tolerant vegetation.

Policy PF 1.1.1: Protect water quality.

Program PF 1.1.1.1: Continue monitoring water quality and publish results as available.

Program PF 1.1.1.2: Continue to monitor the condition of pipes and general infrastructure for water distribution

Objective PF 1.2: Maintain and expand utility infrastructure for the City, prioritizing projects where capacity has been reached.

Policy PF 1.2.1: Avoid disproportionately burdening certain neighborhoods with construction or maintenance costs.

Program PF 1.2.1.1: Create a master plan for infrastructure improvements into the future.

Program PF 1.2.1.2: Distribute costs of large infrastructure improvement projects and services equitably.

Policy AG 3.1.2: Prepare for McFarland's water needs.

Program AG 3.1.2.1: Cooperate with regional, state, and federal agencies such as Drought.gov and the National Integrated Drought Information System (NIDIS) to accurately understand the water demand.

Program AG 3.1.2.2: Cooperate with agricultural industry stakeholders in the City and its Sphere of Influence to promote drought readiness measures.

Program AG 3.1.2.3: Adopt water-wise landscaping at public facilities and parks to reduce demand.

Program AG 3.1.2.4: Showcase drought tolerant landscapes, for instance, with model water-efficient landscapes in public parks, that private citizens could emulate to help encourage broad adoption.

Applicable Regulations:

Federal Safe Drinking Water Act

California Porter-Cologne Water Quality Control Act

California Senate Bill (SB) 610 and 221

California Urban Water Management Planning Act

California Groundwater Management Act

State Updated Model Landscape Ordinance (Assembly Bill 1881 [2006])

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

UTIL – 3 WITH MITIGATION, BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT IMPACTS IN REGARD TO A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER WHICH SERVES OR MAY SERVE THE PROJECT THAT IT HAS (IN)ADEQUATE CAPACITY TO SERVE THE PROJECT'S PROJECTED DEMAND IN ADDITION TO THE PROVIDER'S EXISTING COMMITMENTS.

The proposed Plan states that increase in population and changes in land use under would increase demand for the City of McFarland's wastewater treatment facilities and therefore potentially exceed wastewater treatment requirements of the Central Coast Regional Water Quality Control Board, which mandates that all public sanitary sewer systems and treatment facilities comply with State Waste Discharge Order (WDR Order No. 2006-0003-DWQ). There is a planned expansion of the wastewater treatment plant, but due to the pipe size limitation it would only increase capacity for the west side. The east side has considerably lower capacity for growth, as it served by only one 8-inch pipe. The Plan recommends constructing a new facility on the east side of McFarland to accommodate future growth and demand. In addition to a second wastewater treatment plant, the proposed Plan includes the following objectives, programs and policies that can assist or impact wastewater collection and disposal regarding treatment requirements in the City of McFarland.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Objective PF 1.2: Maintain and expand utility infrastructure for the City, prioritizing projects where capacity has been reached.

Policy PF 1.2.1: Avoid disproportionately burdening certain neighborhoods with construction or maintenance costs.

Program PF 1.2.1.1: Create a master plan for infrastructure improvements into the future.

Program PF 1.2.1.2: Distribute costs of large infrastructure improvement projects and services equitably.

Policy PF 1.2.2: Accommodate future need for sewage infrastructure.

Program PF 1.2.2.1: Examine existing sewage capacity and project increases in use.

Program PF 1.2.2.2: Expand sewer facilities in Eastern McFarland, including the construction of a new wastewater treatment plant.

Policy AG 1.2.2: Use sustainable open space management practices.

Program AG 1.2.2.1: Encourage practices that reduce the strain on the hydrological infrastructure.

Program AG 1.2.2.2: Encourage practices that reduce wastewater demand on the flow-limiting wastewater pipe under Highway 99.

Applicable Regulations:

The National Pollution Discharge Elimination System (NPDES)

Federal Clean Water Act

California General Waste Discharge Requirement

California SB 1087

Significance Before Mitigation: Potentially significant

Significance After Mitigation: Less than significant

UTIL – 4 BUILDOUT OF THE PROPOSED PLAN MAY RESULT IN LESS-THAN-SIGNIFICANT IMPACTS IN REGARD TO GENERATING 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.

The proposed Plan will result in new growth and infrastructure development in key areas within the City of McFarland and this would increase the need for solid waste collection and disposal. R&F Disposal and Recycling, Inc. would not exceed capacity at buildout. The proposed Plan includes the following programs and policies related to solid waste collection and disposal as well as preserving landfill capacity by recycling to reduce the volume ending up at the landfill.

Policy LU 1.6.1: Coordinate development with availability and expansion in public facilities and services.

Objective PF 1.2: Maintain and expand utility infrastructure for the City, prioritizing projects where capacity has been reached.

Policy PF 1.2.1: Avoid disproportionately burdening certain neighborhoods with construction or maintenance costs.

Program PF 1.2.1.1: Create a master plan for infrastructure improvements into the future.

Program PF 1.2.1.2: Distribute costs of large infrastructure improvement projects and services equitably

Policy PF 2.1.1: Provide enough solid waste disposal services for residents and businesses.

Program PF 2.1.1.1: Examine the current waste trends and the capacity of R & F Disposal facilities.

Program PF 2.1.1.2: Continue providing efficient and cost-effective service to residents and businesses in collaboration with R & F Disposal Services or similar provider.

Objective PF 2.2: Reduce the City's waste stream.

Policy PF 2.2.1: Expand recycling and composting citywide.

Program PF 2.2.1.1: Develop and implement a citywide composting program in collaboration with R & F Disposal Services or other entity.

Program PF 2.2.1.2: Establish targets for expansion of recycling and composting within McFarland.

Policy PF 2.2.2: Reduce total waste generation by residents and businesses within the City.

Program PF 2.2.2.1: Develop outreach materials for residents and businesses to decrease the amount of disposed materials.

Applicable Regulations:

Federal Resource Conservation and Recovery Act of 1976

California Integrated Waste Management Act of 1989

California Solid Waste Reuse and Recycling Access Act of 1991

Significance Before Mitigation: Less than significant

UTIL – 5 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN LESS-THAN-SIGNIFICANT IMPACTS IN REGARD TO COMPLYING WITH FEDERAL, STATE, AND LOCAL MANAGEMENT AND REDUCTION STATUTES AND REGULATIONS RELATED TO SOLID WASTE.

The proposed Plan has policies to assure compliance with Federal, State, and local regulations and statutes regarding solid waste. Since the City of McFarland contracts with a private provider for solid waste

disposal, the following policies and programs outlined in the proposed Plan can help the City reduce waste voluntarily and comply with federal, state, and local regulations.

Objective PF 2.2: Reduce the City's waste stream.

Policy PF 2.2.1: Expand recycling and composting citywide.

Program PF 2.2.1.1: Develop and implement a citywide composting program in collaboration with R & F Disposal Services or other entity.

Program PF 2.2.1.2: Establish targets for expansion of recycling and composting within McFarland.

Policy PF 2.2.2: Reduce total waste generation by residents and businesses within the City.

Program PF 2.2.2.1: Develop outreach materials for residents and businesses to decrease the amount of disposed materials.

Applicable Regulations:

Federal Resource Conservation and Recovery Act of 1976

California Integrated Waste Management Act of 1989

California Solid Waste Reuse and Recycling Access Act of 1991

Significance Before Mitigation: Less than significant

4.17.4 Summary of Potential Impacts and Mitigation Measures

The following mitigation measures are intended to mitigate potentially significant impacts regarding Utilities and Service Systems.

REC – 1 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN **POTENTIALLY SIGNIFICANT** ADVERSE IMPACTS REGARDING REQUIRING THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED WATER, WASTEWATER TREATMENT, OR STORM WATER DRAINAGE, ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES, THE CONSTRUCTION OR RELOCATION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

The proposed Plan would accommodate growth and infrastructure development in key areas within the City of McFarland. This might necessitate extension of electric, gas, and telecommunications facilities, and extension of wastewater lines. However, there is no anticipated need to relocate existing facilities. The proposed Plan includes the following mitigation measures.

Mitigation UTIL-1a:

Adhere to construction, enhancement, and expansion outlined in the Storm Drain Master Plan to ensure adequate capacity for projected demand as a result of future growth.

Mitigation UTIL-1b: In addition to ensuring orderly and efficient expansion of the storm drainage system, require on-site storm water retention for future development to minimize environmental impacts.

Mitigation UTIL-1c: Develop and implement Low Impact Development policies for implementation during construction or expansion of storm water drainage facilities to minimize environmental effects and runoff.

Significance After Mitigation: Less than significant.

UTIL – 2 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN POTENTIALLY SIGNIFICANT IMPACTS IN REGARD TO HAVING SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE FUTURE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS.

The area has sufficient water supply to serve existing entitlements and resources, but the Plan does state that water supply can be a limiting factor in growth. The current water supply needs to be supplemented by additional sources and continuously monitored for quality to facilitate growth. Additionally, the City of McFarland needs to reduce its water demand regardless of these impacts. Executive Order B-37-16 and Senate Bill X7-7 mandate water demand reduction which can potentially help the City offset demand associated with projected growth. The proposed Plan includes the following mitigation measures.

Mitigation UTIL-2a: Prepare an urban water management plan (UWMP) as population grows and the City's service area expands to comply with SB 7X-7 (Water Conservation Act of 2009).

Mitigation UTIL-2b: Convert landscapes to drip systems and replace those requiring significant irrigation with drought tolerant vegetation.

Mitigation UTIL-2c: Collaborate and maintain consistency with SSJMUD Management Area Plan to foster decreased water use in public landscapes by 2035 by 25% of 2018 level and to achieve groundwater sustainability by 2040.

Significance After Mitigation: Less than significant.

UTIL – 3 BUILDOUT OF THE PROPOSED PLAN WOULD RESULT IN **POTENTIALLY SIGNIFICANT** IMPACTS IN REGARD TO A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER WHICH SERVES OR MAY SERVE THE PROJECT THAT IT HAS (IN)ADEQUATE CAPACITY TO SERVE THE PROJECT'S PROJECTED DEMAND IN ADDITION TO THE PROVIDER'S EXISTING COMMITMENTS.

The proposed Plan states that increase in population and changes in land use would increase demand for the City of McFarland's wastewater treatment facilities and therefore potentially exceed wastewater treatment requirements of the Central Coast Regional Water Quality Control Board, which mandates that all public sanitary sewer systems and treatment facilities comply with State Waste Discharge Order (WDR Order No. 2006-0003-DWQ). There is a planned expansion of the wastewater treatment plant, but due to the pipe size limitation it would only increase capacity for the west side. The east side has considerably lower capacity for growth, as it is served by only one 8-inch pipe. The Plan recommends constructing a new facility on the east side of McFarland to accommodate future growth and demand. The proposed Plan includes the following mitigation measure.

Mitigation UTIL-3: Develop and adopt a Sewer Master Plan to guide replenishment of water supply and service delivery to meet future demand.

Significance After Mitigation: Less than significant.

4.17.5 REFERENCES

County of Kern (2019). *2018 Kern County Agricultural Crop Report.* Retrieved from http://www.kernag.com/caap/crop-reports/crop10_19/crop2018.pdf

County of Kern GIS: Open-Source Data (2019). 2019 Kern County Crops. Retrieved from https://geodat-kernco.opendata.arcgis.com/datasets/2019

Department of Food and Agriculture (2017). *California Agriculture Vision: Setting a Course of Action for the California State Board of Food and Agriculture*. Retrieved from https://www.cdfa.ca.gov/agvision/docs/AgVision_2017.pdf

Governor's Office of Planning and Research. (2017). *State of California General Plan Guidelines.* Retrieved from http://opr.ca.gov/planning/general-plan/guidelines.html

Kern Groundwater Authority (2019). *Groundwater Sustainability Plan*. Retrieved from http://www.kerngwa.com/assets/kga-umbrella_draft.pdf

Southern San Joaquin Municipal Utility District (2019). *Management Area Plan*. Retrieved from http://www.kerngwa.com/assets/southern-san-joaquin-municipal-utility-district-management-area-plan.pdf

United States Department of Agriculture, Natural Resources Conservation Service Soils (2019). Soil Survey. Retrieved from https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/

4.18 Energy

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

4.18.1 Environmental Setting

This section discusses the regulatory framework and existing conditions of energy in McFarland. Furthermore, this section describes the potential impacts to energy facilities under full build-out of the proposed Plan.

4.18.1.1 Regulatory Framework

This section discusses Federal, State, and local regulations and goals applicable to energy.

Federal Regulations

There are no applicable federal regulations related to energy.

State Regulations

Warren-Alquist State Energy Resources Conservation and Development Act

In 1974, this act established what is now known as the California Energy Commission and enabled the Commission to adopt building energy standards. The California Legislature continues to update the act yearly to address pressing energy needs and issues.

California Code Of Regulations, Title 24, Part 6

This chapter serves as California's Energy Efficiency Standards for Residential and Non-residential Buildings. Title 24 was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. In 2010, the CEC updated Title 24 standards with more stringent requirements. The 2010 standards are expected to substantially reduce growth in electricity and natural gas use. Additional savings result from the application of the standards on building alterations, such as those within Section V (Site Lighting) including Subpart E (Windows), F (Roofs), and S (Mechanical Equipment). These savings are cumulative, increasing as years go by.

Local Regulations

City of McFarland Municipal Code

Although energy services are provided by a private company, the City of McFarland has adopted standards concerning energy use and regulation. Chapter 13.16 of the City's Municipal Code outlines the energy standards for underground facilities. Chapter 15.04 covers the Electrical Code and Energy Code.

Kern County General Plan Energy Element

The Kern County Energy Element is a comprehensive document which defines critical energy related issues facing the County and sets forth goals, policies, and implementation measures to protect the County's energy resources and encourage orderly energy development while affording the maximum protection for the public's health, safety, and the environment.

4.18.1.2 Existing and Baseline Conditions

Electrical Service

The City is located entirely within Southern California Edison's (SCE) service territory. SCE maintains and operates the transmission and distribution infrastructure necessary to provide electricity to end users within McFarland and throughout its entire service area.

Natural Gas

McFarland is located entirely within Southern California Gas Company's (SCG) service territory. SCGC natural gas service lines are currently provided to the project site.

4.18.2 STANDARDS OF SIGNIFICANCE

4.18.2.1 CEQA THRESHOLDS

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), build-out of the Plan would have significant impact on the environment with respect to Energy if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation;
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.18.2.2 METHODOLOGY

The City *of McFarland Background Report* (2020) and the California Emissions Estimator Model® (CalEEMod) were used to assess the potential impacts of the 2040 General Plan buildout on McFarland's energy consumption. Specifically, this included an analysis of natural gas and electric energy use under the different proposed scenarios. The discussion follows and is organized by the impact criteria laid out in the CEQA Appendix G Guidelines.

4.18.3 IMPACT DISCUSSION

This section discusses environmental impacts with respect to Energy.

ENE – 1 BUILD OUT OF THE PROPOSED PLAN WILL RESULT IN LESS-THAN-SIGNIFICANT EFFECTS DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION.

While the proposed Plan will result in new growth and infrastructure development in key areas within the City of McFarland, the Plan focuses on sustainable and conservation policies that can help to prevent excessive consumption of energy. Additionally, the Plan's efforts to reduce VMT will further reduce energy consumption from transportation related activities. As a result of these progressive actions to conserve energy, natural gas use under the proposed plan will reduce by 22% and electricity use will decrease by 11% compared to the no project alternative. This is illustrated in Table 4.18-1 and further discussed Appendix 9.4.

TABLE .18-1: COMPARATIVE ENERGY USE: BUSINESS-AS-USUAL VS. GENERAL PLAN

	Natural Gas Use	**Electricity Use**
	kBTU/yr	*kWh/yr*
(NO PROJECT) Business-As-Usual	982,212,120	240,723,175
General Plan - Unmitigated	935,291,570	235,749,112
- BAU-GP Unmitigated	-5%	-2%
General Plan - Mitigated	761,860,110	213,836,780
- BAU-GP Mitigated	-22%	-11%
- GP-GP Mitigated	-19%	-9%

The proposed Plan includes the following programs and policies that attribute to this reduction in energy use.

Program HO 1.1.1.2: Adopt Sustainable Design Guidelines, which give guidance on sustainable design principles such as sustainable energy.

Program ED 1.3.1.3: Build charging stations for electric and other alternative energy vehicles along Highway 99.

Policy ED 1.6.1: Promote incentives for sustainable business practices.

Program ED 1.6.1.1: Offer reduced development fees for Leadership in Energy and Environmental Design (LEED) Certified buildings.

Program ED 1.6.1.2: Provide a green building incentive program for priority building permit review at no additional fee.

Objective CON 2.3: Conserve energy usage in all sectors.

Policy CON 2.3.1: Educate the public on the importance of energy-saving techniques.

Program CON 2.3.1.1: Work with Public Works Department and invite organizations that can educate the public on energy efficient home goods and climate change to public events and schools.

Policy CON 2.3.2: Seek opportunities to improve energy efficiency within City facilities.

Program CON 2.3.2.1: Conduct energy efficiency and water use audits on all City facilities and create a schedule to prioritize implementation of the most cost-effective efficiency measures.

Program CON 2.3.2.2: Seek grants, low interest loans, and other funding sources for energy efficiency projects at schools and any critical or emergency response facilities.

Policy AQ 2.1.1: Conserve and reduce energy use.

Program AQ 2.1.1.1: Develop energy conservation opportunities.

Program AQ 2.1.1.2: Establish energy conservation requirements for development (e.g., energy efficient light bulbs).

Program AQ 2.1.1.3: Apply neighborhood conservation strategies such as code enforcement and building rehabilitation.

Policy AQ 2.1.2: Develop renewable energy.

Program AQ 2.1.2.1: Invest in sources of renewable energy.

Program AG 4.3.1.3: Promote city-wide adoption of alternative energy

Policy AG 5.2.1: Encourage and support farms and ranches, both large and small, that are seeking to implement programs that increase the sustainability of resources, conserve energy, and protect water and soil in order to increase the viability of diverse farm sizes and types.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

ENE – 2 BUILD OUT OF THE PROPOSED PLAN WILL LESS-THAN-SIGNIFICANTLY CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY.

All development under the proposed Plan would be subject to all applicable renewable energy and energy efficiency plans including those listed in section 4.18.1.1 which discusses related Federal, State and Local regulation. The Plan's policies and programs work to help McFarland meet energy conservation standards and goals set by state and local plans. Furthermore, subsequent projects under the Plan will undergo by the City of McFarland Building Department and CEQA review to ensure they comply with energy conservation standards. Therefore, impact of the proposed Plan on adopted policies, plans, or programs would be less than significant. The following policies demonstrate the Plan's compliance with relevant regulations.

Program HO 1.1.1.2: Adopt Sustainable Design Guidelines, which give guidance on sustainable design principles such as sustainable energy.

Program ED 1.3.1.3: Build charging stations for electric and other alternative energy vehicles along Highway 99.

Policy ED 1.6.1: Promote incentives for sustainable business practices.

Program ED 1.6.1.1: Offer reduced development fees for Leadership in Energy and Environmental Design (LEED) Certified buildings.

Program ED 1.6.1.2: Provide a green building incentive program for priority building permit review at no additional fee.

Objective CON 2.3: Conserve energy usage in all sectors.

Policy CON 2.3.1: Educate the public on the importance of energy-saving techniques.

Program CON 2.3.1.1: Work with Public Works Department and invite organizations that can educate the public on energy efficient home goods and climate change to public events and schools.

Policy CON 2.3.2: Seek opportunities to improve energy efficiency within City facilities.

Program CON 2.3.2.1: Conduct energy efficiency and water use audits on all City facilities and create a schedule to prioritize implementation of the most cost-effective efficiency measures.

Program CON 2.3.2.2: Seek grants, low interest loans, and other funding sources for energy efficiency projects at schools and any critical or emergency response facilities.

Policy AQ 2.1.1: Conserve and reduce energy use.

Program AQ 2.1.1.1: Develop energy conservation opportunities.

Program AQ 2.1.1.2: Establish energy conservation requirements for development (e.g., energy efficient light bulbs).

Program AQ 2.1.1.3: Apply neighborhood conservation strategies such as code enforcement and building rehabilitation.

Policy AQ 2.1.2: Develop renewable energy.

Program AQ 2.1.2.1: Invest in sources of renewable energy.

Program AG 4.3.1.3: Promote city-wide adoption of alternative energy.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

4.18.4 Summary of Potential Impacts and Mitigation Measures

There are no potentially significant impacts associated with Energy, and thus no mitigation measures are required.

4.18.5 References

California Air Pollution Officers Association, (n.d.). The California Emissions Estimator Model® (CalEEMod) Retrieved from: http://www.caleemod.com/

California Energy Commission, (2021). *Warren-Alquist Act*. Retrieved from: https://www.energy.ca.gov/rules-and-regulations/warren-alquist-act

Kern County, (2004). General Plan: Energy Element. Retrieved from: https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGPChp5Energy.pdf

Michael Baker International (2016).General Plan Amendment Environmental Impact Report. *City of McFarland.*

4.19 Tribal Cultural Resources

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. 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 the local Register of Historical Resources as defined in Public Resources Code Section 5020.1(k)?				X
2. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth				X

in subdivision (c) of Public Resources Code Section 5024.1?	

4.19.1 Environmental Setting

This section discusses the regulatory framework and existing conditions of tribal cultural resources in McFarland.

4.19.1.1 Regulatory Framework

This section discusses Federal, State, and local regulations and goals applicable to tribal cultural resources.

Federal Regulations

National Historic Preservation Act (NHPA)

This legislation was passed in 1966 to acknowledge the importance of protecting historically and culturally significant places and resources. The act establishes a funding structures to allocate money for local governments to invest in historic preservation. Under this act, local agencies are directed to consider the impact of development on historic properties.

Native American Graves Protection and Repatriation Act (NAGPRA)

A major purpose of this statute, passed in 1990, is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on Federal and tribal lands. NAGPRA requires that Indian tribes or Native Hawaiian organizations be consulted whenever archeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal lands (Section 3).

State Regulations

California State Assembly Bill 52

This bill further clarifies CEQA processes as they relate to tribal cultural resources by requiring the lead agency to consider effects relative to tribal cultural resources and to conduct consultation with California Native American tribes. The bill requires a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project. The bill also specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources.

California State Senate Bill 18

The principal objective of SB 18 is to preserve and protect cultural places of California Native Americans. SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process.

The California Environmental Quality Act (CEQA)

CEQA Guidelines (2014) section 15064.5 requires local agencies to determine if a project may cause substantial adverse change in the significance of a historical resource. CEQA considers impacts to historical resources as impacts to the environment. This is to protect historical resources from substantial adverse change though physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Adverse change to these resources could potentially impair the material significance. CEQA defines historical resources as meeting one of four requirements:

- If a resource is listed, or determined eligible for listing, in the California Register of Historical Resources.
- The resource is included in a local register of historical resources, as defined in section 5020.1 (k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, unless a preponderance of evidence demonstrates it is not historically or culturally significant.
- The lead agency has determined that the resource is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, and may be considered a historical resource so long as the lead agency's determination is supported by substantial evidence in light of the whole record.
- If the lead agency determines the resource may be a historical resource as defined in Public Resources Code Sections 5020.1 (j) or 5024.1 and the resource is not listed or eligible for listing in the California Register of Historical Resources, not included in a local register (pursuant to section 5020.1 (k) of the Public Resources Code) or identified in a historical resources survey (meeting the criteria of section 5024.1 (g) of the Public Resources Code).

In addition, Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines (2014), state that the lead agency shall determine whether a project may have a significant impact on archaeological resources. If a project is determined to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all resources to be preserved in place or left in an undisturbed state. Preservation in place is preferred to mitigation measures. Preservation in place maintains the relationship between artifacts and the archaeological context. The Public Resources Code provides required mitigation if unique archaeological resources are not preserved in place or not left in an undisturbed state.

Section 15064.5 of the CEQA Guidelines (2014) specifies procedures in the event of an accidental discovery of Native American human remains on non-federal land. These provisions protect such remains from disturbance, disinterment, and inadvertent destruction, outline procedures to be implemented if Native American remains are discovered and establish the Native American Heritage Commission (NAHC)

as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

2013 California Historical Building Code, California Code Of Regulations, Title 24, Part 8

The California Historical Building Code (CHBC), as stated in Sections 18950 to 18961 of Division 13, Part 2.7 of Health and Safety Code, and subject to the rules and regulations in 24 CCR Part 8, supplies regulations and standards for the rehabilitation, preservation, restoration, qualified historical building or structure is any structure or collection of structures, and their associated sites deemed of importance to the history, architecture or culture of an area by an appropriate local or State governmental jurisdiction. This includes any structures in existing or future national, state, or local historical registers or official inventories, such as the National Register of Historic Places (NRHP), State Historical Landmarks, State Points of Historical Interest, and city or county registers or inventories of historic or architecturally significant sites, places, historic districts, or landmarks.

Health And Safety Code, Section 7052, Section 7050.5

Sections 7052 and 7050.5 of the Health and Safety Code outlines penalties associated with the intentional disturbance, mutilation, or removal of interred human remains. Health and Safety Code 7050.5 provides procedural guidelines for the discovery of human remains outside of a dedicated cemetery. The disinterment of remains known to be human and without the authority of law is a felony and intentional disturbance of remains is a misdemeanor.

Public Resources Code Section 5097

Public Resources Code Section 5097 identifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. The character of Native American burials falls within the jurisdiction of the Native American Heritage Commission (NAHC). The NAHC prohibits willfully damaging any historical, archaeological, or vertebrate paleontological site or feature on public lands.

Local Regulations

McFarland and Kern County follow federal and state regulations related to Tribal Cultural Resources.

4.19.1.2 Existing and Baseline Conditions

According to the existing General Plan, there are no National Historical Landmarks (NLM) or no California Historical Landmarks (CHL) in McFarland. The closest eligible place is the Friant-Kern Canal, which is eligible for National Register of Historic Places (NRPH). Aside from this singular off-site example, no historic sites or buildings in the City are listed on the National Register of Historic Places, the California Landmark Series, or List of State Points of Historical Interest. As the threshold for historical significance is fifty years old, certain buildings may be historically significant in the future,

though no historic places were identified as significant upon site analysis and inventory, nor through community outreach. There are a few historic resources in other locations within Kern County.

There are a total of 19 identified tribes with traditional lands or cultural places located within the SOI as identified by the Native American Heritage Commission (NAHC, 2020). The NAHC conducted a Sacred Land's File check which was found to be negative. Appendix 9.1.5.3 shows the results.

In 2015, the City of McFarland initiated a records search of California Historical Resource Information System (CHRIS). The CHRIS search included a review of the NRHP, the CPHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the California State Historic Resources Inventory list, and the Office of Historic Preservation (OHP) Historic Property Directory. The records search identified 14 previously conducted studies and 14 cultural resources within the project site and 200-foot buffer. All of the cultural resources are built environment and were constructed during the 20th century. One resource, the Friant-Kern Canal has been previously determined eligible for the CRHR and NRHP (City of McFarland, 2016).

4.19.2 Standards of Significance

4.19.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), build-out of the Plan would have significant impact on the environment with respect to Tribal Cultural Resources if it would:

1. 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 the local register of historical resources as defined in Public Resources Code Section 5020.1(k);
2. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a 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.

4.19.2.2 METHODOLOGY

The Tribal Cultural Resources impact assessment was based on a review of the National, State, and Local Register of Historic Buildings, and other relevant documentation. The discussion follows and is organized by the impact criteria laid out in the CEQA Appendix G Guidelines.

4.19.3 IMPACT DISCUSSION

This section discusses environmental impacts with respect to Tribal Cultural Resources.

TRIBE – 1 BUILD OUT OF THE PROPOSED PLAN WOULD NOT IMPACT TRIBAL CULTURAL RESOURCES LISTED IN ANY LOCAL OR STATE REGISTER HISTORICAL RESOURCES.

There are no historic sites, features, places, cultural landscapes within the City that are listed on the National Register of Historic Places (NRHP). In 2015, McFarland conducted a records search of California Historical Resource Information System (CHRIS) which includes a review of the NRHP, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the California State Historic Resources Inventory list, and the Office of Historic Preservation (OHP) Historic Property Directory. The records search identified 14 previously conducted studies and 14 cultural resources within the project site and 200-foot buffer. All of the cultural resources are built environment and were constructed during the 20th century. Therefore, the project would have no impact on any tribal cultural resources listed on any local or state registry. Additionally, the City will implement the following policies from the General Plan to further mitigate the impact.

Policy OS 2.1.1: Protect and maintain the City's historic cultural resources.

Program OS 2.1.1.1: Include Native American Tribal Authorities in environmental review processes.

Program OS 2.1.1.2: Provide confidential review and protection for cultural heritage resources if present or found during development.

Additionally, the following mitigation measures under section 4.5.4 of the Cultural Resources section of this EIR protections for hitherto unknown Tribal Cultural Resources in the event that any should be discovered:

MITIGATION CULT-2A

The City of McFarland shall implement the following policy:

In the event that archeological or paleontological resource is unearthed or otherwise discovered during a during construction related activities associate with the proposed Plan, all work must be suspended until a qualified archeologist is consulted.

MITIGATION CULT 4A:

The City of McFarland will implement the following policy in accordance with California Public Resources Code Chapter 1.75 Section 5097.9 – 5097.991 and Section 7050 of the Health and Safety Code.

In the event human remains are discovered during the build-out of the Plan's proposed developments, construction must be stopped, and a qualified coroner must be contacted to determine if the remains are of Native American origin. If the coroner makes this determination, the coroner will contact the Native American Heritage Commission within 24 hours.

Applicable Regulations:

National Historic Preservations Act

Native American Graves Protection and Repatriation Act

SB 18

AB 52

Significance Before Mitigation: No impact

TRIBE – 2 BUILD OUT OF THE PROPOSED PLAN WOULD NOT IMPACT TRIBAL CULTURAL RESOURCES IDENTIFIED BY THE LEAD AGENCY PURSUANT TO CRITERIA SET FORTH IN SUBDIVISION (C) OF PUBLIC RESOURCES CODE SECTION 5024.1 .

A 2015 records search of the California Historical Resource Information System (CHRIS) including a review of the NRHP, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the California State Historic Resources Inventory list, and the Office of Historic Preservation (OHP) Historic Property Directory identified 14 cultural resources within the project site and 200-foot buffer. However, these resources are all built environment and were constructed during the 20th century and will not be impacted by the proposed Plan. Beyond this search, the City reached out to the 19 tribes identified by the Native American Heritage Commission to be historically or culturally associated with the geographic area of the Plan for consultation. McFarland's SOI did not cover any land associated with any of the tribes. Given this information, the lead agency, the City of McFarland, is not aware of any tribal cultural resources that will be impacted by the proposed Plan. Additionally, the City will implement the following policies

from the General Plan and mitigation measures from section 4.5.4 of the EIR to further mitigate the impact.

Policy OS 2.1.1: Protect and maintain the City's historic cultural resources.

Program OS 2.1.1.1: Include Native American Tribal Authorities in environmental review processes.

Program OS 2.1.1.2: Provide confidential review and protection for cultural heritage resources if present or found during development.

MITIGATION CULT-2A

The City of McFarland shall implement the following policy:

In the event that archeological or paleontological resource is unearthed or otherwise discovered during a during construction related activities associate with the proposed Plan, all work must be suspended until a qualified archeologist is consulted.

MITIGATION CULT 4A:

The City of McFarland will implement the following policy in accordance with California Public Resources Code Chapter 1.75 Section 5097.9 – 5097.991 and Section 7050 of the Health and Safety Code.

In the event human remains are discovered during the build-out of the Plan's proposed developments, construction must be stopped, and a qualified coroner must be contacted to determine if the remains are of Native American origin. If the coroner makes this determination, the coroner will contact the Native American Heritage Commission within 24 hours.

Applicable Regulations:

National Historic Preservations Act

Native American Graves Protection and Repatriation Act

SB 18

AB 52

Significance Before Mitigation: No impact

4.19.4 Summary of Potential Impacts and Mitigation Measures

There are no potentially significant impacts regarding Tribal Cultural Resources, as a result, no mitigation measures are necessary.

4.19.5 References

2016 General Plan Amendment Environmental Impact Report. (2016). Michael Baker International. Retrieved from https://www.mcfarlandcity.org/DocumentCenter/View/1883/McFarland-GPA-EIR_Final_August-2018

D. Michael O' Haver, "McFarland: Consolidated General Plan 2011", McFarland Planning Department, September 3, 1991, McFarland Planning Commission.

"National Register of Historic Places." GSA, 4 May 2018, National Park Service.

"The Secretary of the Interior's Standards-Technical Preservation Services, National Park Service." National Parks Service, U.S. Department of the Interior.

4.20 Wildfire

Would The Proposed Plan	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Substantially impair an adopted Emergency Response Plan or Emergency Evacuation Plan?			X	
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

4.20.1 Environmental Setting

This section discusses the regulatory framework and existing conditions of wildfires in McFarland.

4.20.1.1 Regulatory Framework

This section discusses Federal, State, and local regulations and goals applicable to wildfires.

Federal Regulations

Federal Emergency Management Agency

Federal Emergency Management Agency (FEMA) disaster mitigation literature recommends the creation of an Emergency Operation Center, or EOC, under federal National Incident Management Systems (NIMS) programs. This coordination and use of federally integrated communication systems allows for integration with larger emergency management systems during a time of crisis. This also requires close coordination with the relevant agencies before and after an emergency occurs. Federal agencies such as FEMA and the State Hazards Planning agency offer funds to boost the resiliency of communities. Resiliency refers to the City's ability to respond and rebound from an emergency. As emergency preparedness represents a vital issue for safety and security in the City and beyond, the federal funds available represent an opportunity for McFarland to promote emergency preparedness before incidents occur and resiliency in their aftermath.

State Regulations

California Senate Bill 379

California Senate Bill 379, codified at Government Code section 65302(g)(4), requires that all General Plans must address adaptation to the changing climate. Adaptation must be addressed either in the Local Hazard Mitigation Plan (LHMP) or in the safety element of the General Plan. If the local jurisdiction possesses a LHMP, then climate change adaptation must be addressed by the next LHMP revision completed after January 1, 2017. If the local jurisdiction does not possess a LHMP beginning on or before January 1, 2022, then climate change adaptation shall be included directly in the Safety Element. The statute requires that the jurisdiction:

- Conduct a vulnerability assessment
- Create adaptation and resilience goals, policies, and objectives
- Determine, prioritize, and implement implementation measures

The statute further requires that the climate change adaptation plan consider the advice in the General Plan Guidelines from the Office of Planning and Research. Those guidelines require the LHMP process to consider the advice given in the California Adaptation Guide. Therefore, the LHMP process should consider:

- Sea level rise
- Increased wildfire risk
- Increased intensity, frequency, and duration of extreme heat
- Reduced snowpack for water supply
- Increased Intensity of rainfall events

- Plant moisture stress, and insect populations
- Reduced agricultural productivity

The Guidelines strongly encourage utilizing multidisciplinary assessment teams involving local agencies, regional agencies, stakeholders, and the public to conduct the vulnerability assessment and to create and prioritize policy.

California state Assembly Bill 747 (AB 747)

AB 747, also known as the Planning and Zoning Law, requires the legislative body of each county and city to adopt a mandatory safety element for the protection of the community from unreasonable risks associated with the effects of various geologic hazards, flooding, wildland and urban fires, and climate adaptation and resilience strategies. That law requires the safety element to address, among other things, evacuation routes related to identified fire and geologic hazards.

Local Regulation

The City of McFarland follows federal and state regulations on emergency preparedness.

4.20.1.2 Existing and Baseline Conditions

Fire hazard assessment for the Safety Element of McFarland includes the following required components: average weather projections for the year, analysis of potential fuel sources, analysis of historical burn data, federal wildland models, and state models of relative fire danger zones.

McFarland's weather patterns maintain relatively dry conditions year-round. The city receives approximately 7 inches of rainfall per year, with the driest months receiving no rainfall on average. Summer temperatures often average above 90 degrees Fahrenheit (°F), with yearly average temperatures fluctuating between 38 and 99 °F. The 30-year average temperature in McFarland peaks at 98.1 °F during July, making it one of the warmest areas in the state. Yearly wind speed in McFarland averages 5.5 miles per hour (MPH) at 10 meters above the ground with averages during the windiest part of the year reaching 6.7 MPH, in late May. Local wind speeds vary significantly based on tree cover and topography, and these wind conditions could spread sparks and firebrands (ignited pieces of wood) a mile or more from the fire event. Infrequently, high wind events occur in the Central Valley with winds above 70 MPH, increasing relative fire danger during that event.

As the climate changes, climatologists predict that McFarland will receive less annual precipitation, experience more intense storms, suffer increased intensity and duration of heat events, have increased plant moisture stress, changes in insect populations, and suffer reduced agricultural productivity. However, McFarland's location prevents it from being susceptible to sea level rise and wildfire risk from climate change is minimal.

Required historical fire data collected for the area derives from the following tools and resources:

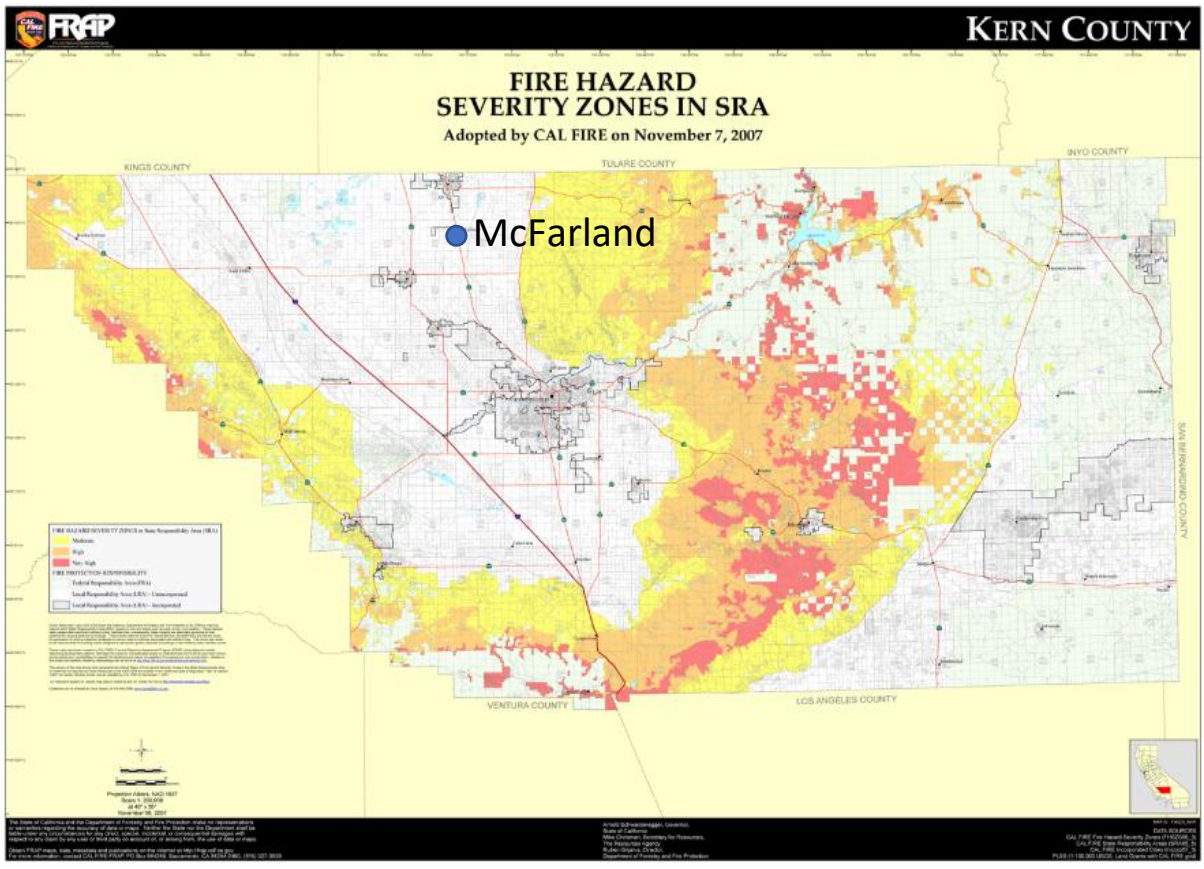
- InciWeb Incident/Hazard Reporting Map Utility
- USGS GeoMac Historical Fire Data Viewer
- Monitoring Trends in Burn Severity (MTBS) Interagency Viewer

These three databases hold the legally required data and satisfy the requirements for fire hazard readiness.

Map 4.20-1 shows Fire Hazard Severity Zones in State Responsibility Areas in Kern County, utilizing land coverage and weather data from MODIS satellite imaging and remote sensing. This final map does not include potential draft local responsibility areas, but it does represent the most active regional zones for fire hazard potential. No Local, State or Federal Responsibility Areas include McFarland or the projected Sphere of Influence.

CAL FIRE specifically designates High or Very High Fire Hazard Zones based on the fire triangle of fuel, oxygen, and ignition. These zones present a significant danger and constraint to development if present, but none appear in McFarland's City limits or its Sphere of Influence. In Map 4.20-1, red represents Very High Fire Hazard Zones, orange represents High Fire Hazard Zones, and yellow marks Moderate Fire Hazard Zones. Areas in grey, like McFarland, remain unclassified, or at lower risk of fire hazard. While the city does not lie within a CAL FIRE recognized Fire Hazard Severity Zone, urban structure fires remain a concern and steps to prepare for an emergency will benefit all residents.

MAP 4.20-2: FIRE HAZARD SEVERITY ZONES IN STATE RESPONSIBILITY AREAS



Basic preparations for evacuation are still an important part of resident safety. Potential ignition sources present in the city today include agricultural equipment, especially during harvest, as well as normal residential and commercial operations.

The City of McFarland sits on land designated as Wildland-Urban Interface by the USGS, or the area where significant vegetation or fuel sources lie near human activity. Two kinds of development cause WUI conditions: interface, the traditional urban-rural divide, or intermix, where development occurs in pockets within an area that has high fire danger. The Sequoia National Forest lies approximately 30 miles to the east of McFarland, and that eastern half of Kern County qualifies as a significant fuel source and an area of significant fire probability, with many areas falling in a High or Very High Fire Hazard Zone.

Twenty-nine catastrophic fire events occurred in California during 2018, including the Camp Fire that devastated large swaths of Butte County. Although large wildfires are unlikely near McFarland, caution is still warranted due to significant potential fuel sources in the area including agricultural waste, liquid fuel, gaseous accelerants, and other significant local point sources of impact in a city of its size. Newer subdivisions are more likely to comply with firesafe building code and material conditions. Industrial, commercial, and residential buildings built before the codes for firesafe construction were enacted possibly pose other concerns in terms of wiring, materials, fuel load, and key evacuation standards including occupancy and initial response time. Kern County Fire maintains records of specific programs and utilities for residents, businesses, and municipalities to engage in resiliency upgrades, home hardening with a 100-foot defensible space buffer, multilingual evacuation information, and other items to assist these situations.

4.20.2 Standards of Significance

4.20.2.1 CEQA Thresholds

According to Appendix N of the Guidelines for the Implementation of the California Environmental Quality Act (2018), build-out of the Plan would have significant impact on the environment with respect to Wildfire if it would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan;
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

4.20.2.2 METHODOLOGY

In order to assess impacts associated with wildfires, preferred growth areas and existing land uses identified in the proposed Plan were compared to the locations of fire hazard zones. The City of McFarland Background Report, policies from the proposed Plan, Multi-Jurisdictional Hazard Mitigation Plan, and Fire Hazard Planning documents published by the State were also used for this analysis. The discussion follows and is organized by the impact criteria laid out in the CEQA Appendix G Guidelines.

4.20.3 IMPACT DISCUSSION

This section discusses environmental impacts with respect to Wildfire.

FIRE – 1 BUILD OUT OF THE PROPOSED PLAN WOULD HAVE A LESS-THAN-SIGNIFICANT IMPACT ON AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN.

The proposed Plan includes the following policies which ensures collaboration with Kern County on the development and implementation of a Disaster and Emergency Preparedness Plan and supports efforts outlines in the existing McFarland Local Hazard Mitigation Plan. Proposed land uses do not interfere with any existing ERPs.

Policy SAF 4.2.1: Coordinate emergency preparedness and response measures with Kern County's Emergency Operations Plan.

Program SAF 4.2.1.1: Plan emergency event evacuation in coordination with county, state, and federal agencies.

Program SAF 4.2.1.2: Establish procedures for safe, prompt, and orderly evacuation, locations of safe meeting areas, emergency supplies including food, water, and medical supplies, and general emergency protocols.

Program SAF 4.2.1.3: Conduct periodic trainings for staff on emergency operations procedures and response.

Program SAF 4.2.1.4: Craft and publicize emergency procedures and define responsibilities for government and non-government entities during a crisis.

Program SAF 4.3.1.2. Assess risk from evacuation and emergency response bottlenecks for hazards, particularly fire, flood, and hazardous materials.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

FIRE – 2 BUILD OUT OF THE PROPOSED PLAN WOULD LESS-THAN-SIGNIFICANTLY EXACERBATE WILDFIRE RISKS FROM SLOPES, PREVAILING WINDS, AND OTHER FACTORS, AND THEREBY WOULD HAVE A LESS-THAN-SIGNIFICANT EFFECT ON EXPOSING PROJECT OCCUPANTS TO POLLUTANT CONCENTRATIONS FROM A WILDFIRE OR THE UNCONTROLLED SPREAD OF A WILDFIRE.

According to CAL FIRE, McFarland and it's SOI does not lie within a Fire Hazards Severity Zone and is at a low risk from fire hazards. The Plan, as a result, does not increase exposure of any project occupants to wildfire spread or wildfire pollutants. While the city does not lie within a CAL FIRE recognized Fire Hazard Severity Zone, urban structure fires and pollutant exposure from nearby higher risks areas outside of McFarland's SOI remain a concern and steps to prepare for an emergency will benefit all residents. Therefore, the Plan includes the following policies to mitigate fire risk.

Objective SAF 2.3: Prepare for urban and wildland fire hazards.

Policy SAF 2.3.1: Evaluate and respond to urban and wildland fire hazards affecting McFarland where present.

Program SAF 2.3.1.2: Update urban and wildland fire threat as data sources become available and seek guidance and data from Cal Fire.

Policy SAF 2.3.3: Evaluate fire threats in existing and proposed developments.

Program SAF 2.3.3.1: Coordinate fire threat evaluation with Kern County Fire, given Cal Fire threat assessments and federal data sources.

Program SAF 2.3.3.2: Enact measures for resident and employee safety in areas of recognized commercial and industrial fire threat.

Program SAF 2.3.3.3: Reduce vulnerability especially with vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.) to prevent drought/extreme weather-related fire risk.

Program SAF 2.3.3.4: Encourage commercial and industrial properties to maintain fire safe standards and operate in a safe manner when handling flammable materials or byproducts.

Policy SAF 2.3.4: Create defensible space for McFarland through best management practices.

Program SAF 2.3.4.1: Encourage abatement of potentially flammable material through trimming, thinning, or reduction of potential fuel from habitable or occupied areas according to Cal Fire defensible space standards.

Program SAF 2.3.4.2: Check with state and federal hazard management agencies for updated areas of concern in wildland and urban fire scenarios on a 10-year cycle.

Policy SAF 2.3.5: Adopt uniform building and fire codes as they are updated by the State.

Policy SAF 2.3.6: Educate the public about fire safety.

Program SAF 2.3.6.1: Promote public fire safety education programs to reduce accidents, injuries, and fires in coordination with McFarland School District and community agencies.

Program SAF 2.3.6.2: Promote public safety through Cal Fire programs, pamphlets, and education opportunities with school and community engagement in English and Spanish.

Objective PF 3.2: Provide enough fire services for residents and businesses.

Policy PF 3.2.1: Maintain adequate staff and equipment in collaboration with Kern County.

Program PF 3.2.1.1: Continue to fund, budget, and maintain the contracted fire services from Kern County.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

FIRE – 3 BUILD OUT OF THE PROPOSED PLAN WOULD RESULT IN A LESS-THAN-SIGNIFICANT IMPACT ON THE INSTALLATION OR MAINTENANCE OF ASSOCIATED INFRASTRUCTURE (SUCH AS ROADS, FUEL BREAKS, EMERGENCY WATER SOURCES, POWER LINES OR OTHER UTILITIES) THAT MAY EXACERBATE FIRE RISK OR THAT MAY RESULT IN TEMPORARY OR ONGOING IMPACTS TO THE ENVIRONMENT.

As addressed in FIRE-2, McFarland and it's SOI does not lie within a CAL FIRE designated Fire Hazards Severity Zone and is at low risk of fire hazard. Furthermore, any subsequent projects required as part of the proposed Plan are subject to CEQA review. While the city does not lie within a CAL FIRE recognized Fire Hazard Severity Zone, urban structure fires remain a concern and steps to mitigate fires risk are still important. Therefore, the Plan includes the following policies to mitigate fire risk.

Objective SAF 2.3: Prepare for urban and wildland fire hazards.

Policy SAF 2.3.1: Evaluate and respond to urban and wildland fire hazards affecting McFarland where present.

Program SAF 2.3.1.2: Update urban and wildland fire threat as data sources become available and seek guidance and data from Cal Fire.

Policy SAF 2.3.3: Evaluate fire threats in existing and proposed developments.

Program SAF 2.3.3.1: Coordinate fire threat evaluation with Kern County Fire, given Cal Fire threat assessments and federal data sources.

Program SAF 2.3.3.2: Enact measures for resident and employee safety in areas of recognized commercial and industrial fire threat.

Program SAF 2.3.3.3: Reduce vulnerability especially with vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.) to prevent drought/extreme weather-related fire risk.

Program SAF 2.3.3.4: Encourage commercial and industrial properties to maintain fire safe standards and operate in a safe manner when handling flammable materials or byproducts.

Policy SAF 2.3.4: Create defensible space for McFarland through best management practices.

Program SAF 2.3.4.1: Encourage abatement of potentially flammable material through trimming, thinning, or reduction of potential fuel from habitable or occupied areas according to Cal Fire defensible space standards.

Program SAF 2.3.4.2: Check with state and federal hazard management agencies for updated areas of concern in wildland and urban fire scenarios on a 10-year cycle.

Policy SAF 2.3.5: Adopt uniform building and fire codes as they are updated by the State.

Policy SAF 2.3.6: Educate the public about fire safety.

Program SAF 2.3.6.1: Promote public fire safety education programs to reduce accidents, injuries, and fires in coordination with McFarland School District and community agencies.

Program SAF 2.3.6.2: Promote public safety through Cal Fire programs, pamphlets, and education opportunities with school and community engagement in English and Spanish.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

FIRE – 4 BUILD OUT OF THE PROPOSED PLAN WOULD RESULT IN A LESS-THAN-SIGNIFICANT RISK IN EXPOSING PEOPLE OR STRUCTURES TO DOWNSLOPE OR DOWNSTREAM FLOODING OR LANDSLIDES, AS A RESULT OF RUNOFF, POST-FIRE SLOPE INSTABILITY, OR DRAINAGE CHANGES.

As addressed in FIRE-2 and 3, McFarland and it's SOI does not lie within a CAL FIRE designated Fire Hazards Severity Zone and is at low risk of fire hazard. Due to the low risk of fire, there is a very small likelihood that any wildfire related slope instability, drainage changes, or run off caused by wildfires would occur. Thus, the proposed Plan will less than significantly impact the risk of downslope or downstream flooding or landslides caused by fire related geological events. While wildfire risk is low in McFarland, urban structure fires remain a concern and steps to mitigate fires risk are still important. Therefore, the Plan includes the following policies to mitigate fire risk and its effect on geology in the region.

Policy SAF 2.2.2: Reduce flood risk for new development and critical infrastructure.

Program SAF 2.2.2.1: Prior to development, encourage flood risk assessment and possible mitigation measures to reduce risks to life and property.

Program SAF 2.2.2.2: Prohibit development in the 100-year flood plain unless mitigation measures meeting Federal Flood Insurance Administration criteria are provided.

Objective SAF 2.3: Prepare for urban and wildland fire hazards.

Policy SAF 2.3.1: Evaluate and respond to urban and wildland fire hazards affecting McFarland where present.

Program SAF 2.3.1.2: Update urban and wildland fire threat as data sources become available and seek guidance and data from Cal Fire.

Policy SAF 2.3.3: Evaluate fire threats in existing and proposed developments.

Program SAF 2.3.3.1: Coordinate fire threat evaluation with Kern County Fire, given Cal Fire threat assessments and federal data sources.

Program SAF 2.3.3.2: Enact measures for resident and employee safety in areas of recognized commercial and industrial fire threat.

Program SAF 2.3.3.3: Reduce vulnerability especially with vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.) to prevent drought/extreme weather-related fire risk.

Program SAF 2.3.3.4: Encourage commercial and industrial properties to maintain fire safe standards and operate in a safe manner when handling flammable materials or byproducts.

Policy SAF 2.3.4: Create defensible space for McFarland through best management practices.

Program SAF 2.3.4.1: Encourage abatement of potentially flammable material through trimming, thinning, or reduction of potential fuel from habitable or occupied areas according to Cal Fire defensible space standards.

Program SAF 2.3.4.2: Check with state and federal hazard management agencies for updated areas of concern in wildland and urban fire scenarios on a 10-year cycle.

Policy SAF 2.3.5: Adopt uniform building and fire codes as they are updated by the State.

Policy SAF 2.3.6: Educate the public about fire safety.

Program SAF 2.3.6.1: Promote public fire safety education programs to reduce accidents, injuries, and fires in coordination with McFarland School District and community agencies.

Program SAF 2.3.6.2: Promote public safety through Cal Fire programs, pamphlets, and education opportunities with school and community engagement in English and Spanish.

Applicable Regulations: None

Significance Before Mitigation: Less than significant

4.20.4 Summary of Potential Impacts and Mitigation Measures

There are no potentially significant impacts associated with Wildfire, and thus no mitigation measures are required.

4.20.5 References

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5 Significant Unavoidable Adverse Impacts

The Executive Summary in Chapter 1 contains Table 1-1, which summarizes the proposed Plan's impacts, mitigation measures, and levels of significance before and after mitigation. The policies and actions from the proposed Plan and mitigation measures, where available, would reduce the level of impacts to less than significant as pointed out and explained in respective sections of the topics under Environmental Analysis.

Chapter 7 describes significant unavoidable impacts, which are those that cannot be reduced to a less-than-significant level. Details for each of these impacts can be found in the elements' corresponding sections in Chapter 4 of this EIR.

6 Alternatives

6.1 Introduction

The proposed Plan is described and analyzed in this EIR, with an emphasis on potentially significant impacts and recommended mitigation measures to avoid those impacts. The California Environmental Quality Act (CEQA) guidelines require a comparative analysis of a reasonable range of alternatives to the proposed Plan that could attain most of the basic objectives of the project in a feasible manner. If the alternative with the least environmental impact is the No Project Alternative, then the EIR must also designate the next most environmentally superior alternative. The purpose of this discussion is to inform the public and decision makers of feasible alternatives that would avoid or substantially lessen any significant effects of the Plan and to compare the alternatives to the proposed Plan.

This chapter includes an evaluation of three alternatives to the proposed Plan. CEQA Section 15126.6(e) requires the consideration of a "No Project alternative" in every EIR. For the City of McFarland 2040 General Plan, the "No Project Alternative" is classified as the Business-As-Usual Scenario. In this alternative, the proposed Plan would not be adopted and the existing plans and policies of the previously adopted Plan and its policies and the 2009-2014 Housing Element would continue to be implemented. Consistent with CEQA Guidelines Section 15126.6(b), the other two alternatives selected for analysis "focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be costlier." The three alternatives are described below.

6.2 Project Alternatives

The Business-As-Usual Alternative, also called No Project alternative, is based on historic growth patterns and land use trends. The Business-As-Usual Alternative includes the expansion of the City and its Sphere of Influence (SOI) to the south including unrestricted conversion of agricultural land to various types of development. This alternative envisions primarily commercial and industrial development along Highway 99. Residential, institutional, and other development continues to the west and to the east of the Highway 99 corridor. Transportation systems remain automobile-oriented with some improvements for pedestrian connectivity and comfort. Extensive development, including residential development, occurs in 100-year and 500-year floodplains, presenting risks to life and property. Utilities must expand and improve to provide adequate capacity, especially wastewater and stormwater on the east side of the City.

TABLE 6.2-1: COMPARISON OF ESTIMATED BUILDOUT OF PLAN ALTERNATIVES

ALTERNATIVE	HOUSING	POPULATION	JOBS
Business-As-Usual	7,580	23,690	11,835
Redevelopment	8910	27,855	14,175
Smart Growth	10,630	33,220	17,195
General Plan	10,630	33,220	17,195

The Moderate Growth and Redevelopment Alternative advocates focusing growth on underutilized and vacant parcels to concentrate growth within walkable, bikeable, or bus-ride distances to retail and services. This alternative identifies 5 areas of proposed growth:

- Downtown Core
    - Mixed-use commercial and residential development close to shops, amenities, and public spaces.
- North and West Neighborhoods
    - Commercial infill, high density housing, and improved connectivity to activity hubs in the City.
- Southern Highway Commercial
    - New commercial area south of the City along Highway 99 to create opportunities for such businesses as grocery stores and retail centers that require large space.
- East Neighborhood
    - Mixed-use office buildings along the highway corridor, ADUs throughout the neighborhood, and improved connectivity to the west side of the City.

The Moderate Growth and Redevelopment Alternative prioritizes mixed-use designations and infill development to create growth within the City while reducing sprawl and improving residential transport connectivity. This alternative also offers diverse transportation options that address walkability and bike-ability between regions of the City and the expansion of existing bus transit service.

The Smart Growth Alternative accounts for the most aggressive population growth for the City of McFarland, maximizing infill within the City and new development outside of the existing City boundary to accommodate the maximum projected population, housing, and job growth. This alternative identifies three key areas for growth of housing and jobs across the City:

- Downtown Infill
    - The entire downtown core is to be designated for mixed-use development which would allow buildings to host commercial or office on the first floor and residential units on the upper floors. This increase in density has the potential to offer density bonus opportunities for affordable housing developers.
- Westside Expansion
    - A range of low-to-high density residential developments to accommodate projected population growth. High-density residential development is proposed along the westside's main arterial roadway, Garzoli Avenue, while medium and low-density housing is proposed on slower moving residential streets.
- Highway 99 Improvements

- This area promotes highway-serving commercial uses such as gas stations and hotels, as well as industrial uses such as manufacturing along Highway 99.

The Smart Growth Alternative focuses its aggressive growth in three key areas to serve the needs of neighborhoods, the region, and travelers on Highway 99. To avoid locating new residential development in hazard areas, the Smart Growth Alternative increases the density of housing typologies, particularly in the Downtown Infill and Westside expansion key growth areas. Additionally, new mixed-use and commercial development are prioritized in the Downtown Infill to support a vibrant downtown core and at key intersections within the Westside Expansion key growth area (Garzoli Avenue at Perkins, Sherwood, and Taylor Avenues). Commercial development is also prioritized along Highway 99 to encourage highway travelers to stop for services in McFarland.

The Preferred Growth Alternative is the General Plan. It represents the vision for development changes in McFarland by the year 2040. This Alternative includes a combination of the community's preferred concepts, derived from the previous three alternatives. The Preferred Growth Alternative influences future land use designations, housing allocation, and circulation improvements needed to meet the population growth projections and targets for job growth.

The main features of this alternative include medium and high density mixed-use downtown and along major arterials west of downtown as well as the establishment of neighborhood retail centers. This provides the opportunity to integrate housing and commercial uses, making services readily accessible to large segments of the population. In addition to mixed use commercial, this alternative includes commercial uses along Highway 99 to cater for pass-through traffic and industrial uses to the south to boost the availability of jobs. The Preferred Alternative therefore includes the following variety of changes to land use:

- Infill development for housing and commercial growth on the west side of the City.
- A neighborhood commercial corridor along Kern Avenue to serve the east side of the City.
- Downtown mixed-use redevelopment to create a vibrant atmosphere in the center of the City.
- Commercial and industrial development along Highway 99.
- Additional Accessory Dwelling Units in the Centra McFarland neighborhoods.

Circulation for this alternative, includes a network of complete streets, a pedestrian and bike network, new transit stops for internal transit service and at major commercial centers along Highway 99, and safer pedestrian crossings between the east and west sides of the City. These new circulation connections are to expand multi-modal transportation throughout the City.

The alternative concentrates development in key growth areas to target McFarland's most optimal locations for development: Downtown, Western McFarland, and the Highway 99 Corridor. Growth areas are designed to accommodate maximum growth while aligning with McFarland's desires to remain an agriculture-based City. Even with the many changes, McFarland's small-town community character is envisioned to remain. The full description of the Preferred Growth Alternative (Chapter 5 of the General Plan) includes the identification of further implications for each of the General Plan elements.

6.3 Comparison of Growth Alternatives

Table 6-2 includes projections for the number of total residents, housing units, and targeted jobs for the three alternate growth scenarios. Due to differing assumptions in growth patterns for population, housing and economic growth, each alternative varies in its projected outcomes in these areas. Table 6.2-2 compares the Business-As-Usual (No Project), Moderate Growth, and Progressive Growth alternatives with the Preferred Growth Scenario of the proposed McFarland 2040 General Plan as they relate to impacts to the environment in the impact areas required by CEQA. The analysis suggests the proposed Plan has offers varying levels of improvement overall in comparison with the other alternatives.

TABLE 6.3-1: COMPARISON OF DEVELOPMENT ALTERNATIVES

AREA OF IMPACT	NO PROJECT	REDEVELOPMENT	SMART GROWTH
Aesthetics	-	-	=
Agricultural Resources	--	-	=
Air Quality	--	=	=
Biological Resources	--	=	=
Archeological and Historical Resources	=	=	=
Geology and Soils	-	=	=
Greenhouse Gas Emissions	--	-	-
Hazards and Hazardous Materials	-	=	=
Hydrology and Water Quality	--	-	=
Land Use	--	-	-
Mineral Resources	=	=	=
Noise	-	=	=
Population and Housing	-	=	=
Public Services	=	=	=
Recreation	-	=	=
Transportation	--	--	-
Utilities and Services	--	-	=
Energy	--	--	-
Tribal Cultural Resources	=	=	=
Wildfire	-	=	=

++ Substantial Improvement compared to the proposed Plan
+ Slight Improvement compared to the proposed Plan
= Similar to the proposed Plan
- Slight deterioration compared to the proposed Plan
-- Substantial deterioration compared to the proposed Plan

6.4 No Project Alternative

6.4.1 Principal Characteristics

The Business-As-Usual Alternative continues the existing development patterns of McFarland, based on historic growth patterns and current land use trends. None of the policies and programs proposed by the City of McFarland 2040 General Plan would be implemented. The Business-As-Usual Alternative involves the expansion of the City and its Sphere of Influence on the south, converting agricultural land to various types of commercial and industrial developments along Highway 99. Residential, institutional, and other land uses continue to the west and to the east of the Highway 99 corridor. Transportation systems remain automobile-oriented with some improvements for pedestrian connectivity and comfort. Extensive development, including residential development, occurs in 100 and 500-year floodplains, requiring utilities to expand and improve to provide adequate capacity.

6.4.2 Impact discussion

The No Project Alternative would have the following impacts relative to the proposed Plan.

6.4.2.1 Aesthetics

If the No Project Alterative is chosen, policies under the existing General Plan would continue to be implemented. The existing General Plan lacks policies that regulate aesthetics. Such policies include the adoption of height limits and policies regarding general aesthetics. Additionally, the No Project Alternative does not provide the necessary policy direction to focus development and reduce impacts throughout the City. However, even under the No Project Alternative it is assumed that the City would continue to evaluate the environmental impacts of these projects on a case-by-case basis and would identify all applicable feasible mitigation measures for significant impacts. Therefore, the No Project Alternative depicts a **slight deterioration** in comparison to the proposed Plan.

6.4.2.2 Agricultural resources

Development under the Business-As-Usual scenario will not maintain and preserve existing agricultural land and resources. Planned annexation and rezoning indicate the placement of heavy industry and residential uses on certain agricultural lands. Prime agricultural soils and lands represent a limited and diminishing natural resource. Although the existing General Plan contains policies to protect agricultural resources, the proposed Plan contains a far more extensive set of policies and programs to

protect natural ecosystems and agricultural lands and increase total agricultural land. Therefore, the No Project Alternative is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.3 AIR QUALITY

Under the Business-As-Usual alternative scenario, the policies and programs of the existing General Plan would continue to be implemented. The current General Plan does not contain policies or programs that address air quality. Increases in population and new development projects would not have any guidance in how to measure changes in air quality as a result of these activities, and how to prevent air quality degradation. Land use under this alternative would continue to be low-density in nature, promoting the continued use of private automobiles as the primary mode of transportation. This would lead to increases of harmful substances such as ozone precursors and particulate matter. In addition to promoting mixed-use development, the proposed Plan includes policies and programs to minimize the amount of harmful substances that are released as a consequence of population growth and development. Therefore, the Business-As-Usual Alternative is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.4 BIOLOGICAL RESOURCES

If the Business-As-Usual Alternative is chosen, the policies and programs under the existing General Plan would continue to be implemented. The current General Plan has little policy regarding protection of biological resources. Under the current General Plan, low density residential housing units would continue to be built with little policy directive on how to protect biological resources while doing so. This has the potential to encroach upon habitats that support sensitive species.

Many policies and programs in the proposed Plan explicitly state how the City will protect biological resources. For example, Policy CON 3.3.1 states that new development should coordinate with the US Fish and Wildlife services to ensure development does not disturb any critical habitats identified through biological resource assessments. Without these policies and programs, critical habitats along with other biological resources in the City may be lost. Therefore, the Business-As-Usual project alternative is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.5 ARCHEOLOGICAL AND HISTORICAL RESOURCES

The proposed Plan is no different than the No Project Alternative because there are no known archeological or historical resources within the project area. However, construction resulting from new development by the proposed Plan has the potential to disturb cultural resources that are currently buried or undiscovered. Therefore, the No Project Alternative is a **similar** in comparison to the proposed Plan.

6.4.2.6 GEOLOGY & SOILS

Under the Business-As-Usual Scenario the proposed Plan would not be adopted and the current policies, and programs implemented in the current General Plan in regard to geology and soils would persist. The City of McFarland's current Safety Element was adopted in the 2016 and has minimal policy direction of geology and soils. Fortunately, soil composition and seismic activity have not changed significantly since then. There are significant advances in the policy put forth in the proposed Plan to ensure that development is handled with an emphasis on safety in regard to seismic activity as well as suitable soils for construction. Policies and actions in the new plan such as "Monitor and enforce structural safety standards to reduce risks for seismic and geologic hazards" (Program SAF 2.1.1.6) and prohibiting development in areas of serious geologic risk "unless seismic and geologic hazards can be reduced to reasonable levels" (Program SAF 2.1.1.5) are an improvement from the existing plan. Therefore, the Business-As-Usual alternative is a **slight deterioration** in comparison to the proposed Plan.

6.4.2.7 GREENHOUSE GAS EMISSIONS

Under the No Project Alternative, the City of McFarland will adhere to existing General Plan policies influencing the generation of greenhouse gas emissions. Land use under this alternative would continue to be low-density in nature, promoting the continued use of private automobiles as the primary mode of transportation. This would lead to an increase in greenhouse gas emissions per capita. The 2011 General Plan does include policies that will encourage alternative modes of transportation, compact development, and energy conservation standards. The proposed Plan will drastically reduce transportation related greenhouse gas emissions through progressive policies that reduce vehicle miles traveled by promoting mixed-use development. Additionally, the proposed Plan includes policies and programs to minimize greenhouse gas emissions associated with population growth and development. Therefore, the Business-As-Usual Alternative is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.8 HAZARDS & HAZARDOUS MATERIALS

Under the Business-As-Usual Alternative, the policies and programs of the existing General Plan, including standards for hazards and hazardous materials, would continue to be implemented and guide growth in the City of McFarland. Under the No Project Alternative, there would be less development and therefore potentially less hazardous material transportation and also less infrastructure at risk for hazards. While the risks posed from hazards and hazardous materials would likely be less significant under the Business-As-Usual Alternative, this scenario would not implement the updated policies and plans outlined in the 2040 General Plan to manage hazards and handle hazardous waste. Therefore, the Business-As-Usual Scenario is a **slight deterioration** in comparison to the proposed Plan.

6.4.2.9 HYDROLOGY & WATER QUALITY

Under the Business-As-Usual Alternative, the policies and programs of the existing General Plan would continue to be implemented. The City of McFarland's General Plan has minimal policy direction of hydrology and water quality. Land use trends under this alternative would continue to favor low-density, single-family residential development. Such development has the potential to increase the amount of impervious surfaces, increasing runoff. This alternative would not adopt policies a programs aimed at reducing the overall water usage of the City. It would also not implement programs that would quantify decreases in water quality due to runoff generated by development. Finally, this alternative would not adopt policies that would require drainage improvements in order to mitigate on and off-site drainage impacts of new developments. Therefore, the Business-As-Usual Scenario is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.10 LAND USE

The Business-As-Usual Alternative would continue the low-density, single-family nature of land use in McFarland. By 2040, the City would need to implement 4,500 new housing units by 2040 to accommodate population growth. As a mandatory requirement of the State Housing Law, the Regional Housing Needs Allocation (RHNA) is a critical part of a jurisdiction's periodic update of the Housing Element (Government Code Section 665580 et Seq.), thus McFarland would be implementing new housing elements in accordance with State Law. The proposed Plan would include medium and high-density mixed-use parcels located in the Downtown, North, and West neighborhoods to accommodate new residents of all incomes, household types, and persons with special needs. Commercial and light industrial land uses would increase Downtown and along the Highway 99 to improve economic development. Therefore, the Business-As-Usual Alternative is a **substantial deterioration** in comparison with the proposed Plan.

6.4.2.11 MINERAL RESOURCES

Under this Alternative, the policies and programs of the previously adopted McFarland General Plan would continue to be implemented. The proposed Plan would be an improvement over the Business-As-Usual Scenario as the current Plan does not set forth any goals, objectives, or actions that would help protect the availability of mineral resources for future use in its Open Space and Conservation Element. However, there are few available mineral resources within the City of McFarland, minimizing the effect of a lack of policy. Therefore, the Business-As-Usual Alternative would be **similar** in comparison to the proposed Plan with regard to mineral resources.

6.4.2.12 NOISE

Under the Business-As-Usual approach, policies and programs from the existing General Plan will guide how the City addresses impacts of noise. Similar to the proposed Plan, the No Project Alternative would consist of commercial and light industrial development along Highway 99, which would potentially lead to a slight increase in permanent ambient noise levels in the adjacent noise sensitive areas. Unlike the proposed Plan, the No Project Alternative does not consolidate growth or provide as much separation between incompatible land uses and would thus lead to a slight increase in ambient and period noise levels in comparison to the proposed Plan. Policies and programs in the proposed Plan intended to protect the City from noise, such as protections on the time, location, and level of noise, will not be implemented with the Business-As-Usual Approach. Therefore, the No Project Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.4.2.13 POPULATION & HOUSING

Under the Business-As-Usual approach, McFarland would grow along four key growth areas: Downtown, East McFarland Extension, Whisler Road, and Famoso Road. The number of housing units would need to be increased by a minimum of 4,500 units, reducing any potential impacts. Displacement of existing populations would be kept to a minimum. The proposed growth would be characterized by 90% low density development with some medium density and high-density development (10%). The programs and policies in the proposed Plan that would mitigate impacts to housing, such as support for low-income renters, would not be available. As a result, this approach of this alternative is a **slight deterioration** in comparison to that of the proposed Plan.

6.4.2.14 PUBLIC SERVICES

Under a Business-As-Usual scenario, the City of McFarland would be guided by policies and programs outlined in the 2011 General Plan and guided by current growth trends. As many of the public services, such as Fire and Emergency Services, Police Services, and Schools, in the City of McFarland are functioning and have sufficient capacity to serve community members, this alternative would not likely have a significant difference from the proposed Plan. The proposed Plan may strain capacity of such services due to population growth. On the other hand, the proposed Plan outlines objectives and policies to increase park access and improve public facilities. Therefore, the Business-As-Usual approach is **similar** in comparison with the proposed Plan.

6.4.2.15 RECREATION

Under the Business-As-Usual approach, policies and programs from the existing General Plan will guide how the City addresses conservation of open space. The proposed Plan would be an improvement over the Business-As-Usual Scenario as the proposed Plan sets forth a more comprehensive list of policies and programs to address parks, recreation, and open space. Additionally, the proposed Plan allocated 3% of currently vacant land for parks. Therefore, the Business-As-Usual Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.4.2.16 TRANSPORTATION

Under the Business-As-Usual alternative, policies and programs outlined in the existing General Plan would be used to guide growth. Programs and policies proposed in the 2040 General Plan, such as complete streets improvement, traffic calming, sidewalk repair, standards for pedestrian and bicycle safety, and mixed-use compact development would be absent. These types of policies and programs would allow for mitigation of potential impacts of increased traffic and other transportation issues resulting from increase population growth. Therefore, the Business-As-Usual alternative is a **substantial deterioration** over the proposed Plan.

6.4.2.17 UTILITIES & SERVICES

The No Project Alternative would result in smaller growth trends and patterns for population, housing, and employment growth in the City of McFarland compared to the proposed Plan. Nevertheless, population growth under the Business-As-Usual scenario will still affect the quality of service of utilities and capacity of utility facilities. Under this alternative, the City's Utility Service Systems would not benefit from programs and policies of the proposed Plan and continue to serve current population and housing trends. For example, the proposed Plan calls for the expansion of sewer facilities on the eastside to accommodate future growth. Development on the Eastside of McFarland as predicted in the Business-As-Usual alternative would be significantly negatively impacted by the lack of available sewer facilities serving that side of the City. Therefore, the No Project Alternative is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.18 ENERGY

Under this Alternative, the policies and programs of the previously adopted McFarland General Plan would continue to be implemented. The Business-as-Usual Scenario does not set forth any goals, objectives, or actions that could help to conserve energy use. Population growth under the Plan would be

greater compared to this alternative causing an increase in energy demand. However, this demand would likely be offset through policies and programs in the proposed Plan to conserve energy use. Additionally, the proposed Plan's focus on efficient transportation and increased density, can further reduce transportation related energy use. Therefore, the No Project Alternative is a **substantial deterioration** in comparison to the proposed Plan.

6.4.2.19 Tribal Cultural Resources

The proposed Plan is no different than the No Project Alternative because there are no known tribal cultural resources within the project area. However, construction resulting from new development under the proposed Plan has the potential to disturb cultural resources that are currently buried or undiscovered. Therefore, the No Project Alternative is a **similar** in caparison to the proposed Plan.

6.4.2.20 Wildfire

Under the Business-as-Usual Alternative, the policies and programs of the existing General Plan would continue to be implemented. As McFarland does not lie in a Fire Hazard Severity Zone, the risk of wildfire is relatively low. However, urban fires and pollutant exposure from nearby high-risk areas remain a concern. The proposed Plan includes additional policies to reduce the impact of wildfires. Therefore, the Business-as-Usual Scenario is a **slight deterioration** in comparison to the proposed Plan.

6.5 Moderate Growth and Redevelopment Alternative

6.5.1 Principal characteristics

The Moderate Growth and Redevelopment Alternative (Redevelopment Alternative) places new construction on sites with pre-existing uses using redevelopment principles such as infill development, densification, and repurposing of land. The Redevelopment Alternative focuses development primarily on underutilized and vacant parcels within the existing City boundary with the option to expand through annexation as needed. The Moderate Growth and Redevelopment Alternative envisions maximizing the use of land within City limits and focuses on higher-density compact infill development. This alternative also recommends implementing circulation improvements community members to schools, residential areas, and shopping opportunities, including a new full-service grocery store with healthy and affordable food options. Another assumption limits new development in McFarland to a maximum building height of 3 stories to maintain the community's small-town character.

6.5.2 Impact discussion

The Redevelopment Alternative would have the following impacts relative to the proposed Plan.

6.5.2.1 Aesthetics

The Redevelopment Alternative would implement some new policies such as limiting new development of downtown McFarland to a maximum building height of 3 stories to maintain the community's small-town character, infill of vacant lots, and development of Accessory Dwelling Units (ADUs) on underutilized lots. While many policies in this alternative would be similar to those of the proposed Plan, the most prominent difference is similarity with the existing general plan in areas outside of downtown. Therefore, the Redevelopment Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.5.2.2 Agricultural resources

The Redevelopment Alternative would involve a higher density of land development, but with the addition of fewer housing units overall than the proposed Plan. This would be beneficial to the conservation of agricultural lands in the City of McFarland and the Sphere of Influence, as much growth would occur inside present-day urban boundaries. However, in this scenario some loss of agricultural land would occur. Much of this development is low density adjacent to farmland, potentially promoting incompatible uses, and predisposing surrounding agricultural land to conversion as the City builds out to accommodate regional growth demands. Therefore, the Redevelopment Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.5.2.3 Air quality

The Redevelopment Alternative places an emphasis on infill of core areas of the City, a similar land use pattern to the proposed Plan. Focus on compact development will help reduce any negative effects as a result of increases in population development. Therefore, the Redevelopment Alternative is **similar** in comparison to the proposed Plan.

6.5.2.4 Biological resources

Both the proposed Plan and the Redevelopment Alternative do not infringe on any biological resources including any sensitive habitats. As a result, neither alternative would have any impact on biological

resources within the City of McFarland or the Sphere of Influence. Therefore, the Redevelopment Alternative is **similar** in comparison to the proposed Plan.

6.5.2.5 Archeological and Historical resources

Archeological and Historical resources would be similarly affected by the Redevelopment Alternative compared to the proposed Plan. In the Redevelopment Alternative, policies, programs, and objectives, as well as Federal, State, and local regulations will apply to new growth and restoration. However, that does not change the resulting potentially significant and unavoidable impacts with respect to Archeological and Historical Resources. Therefore, the Redevelopment Scenario is **similar** in comparison to the proposed Plan.

6.5.2.6 Geology & soils

The Redevelopment Alternative would implement less development than the proposed Plan. This would put fewer new structures at risk of damage from geological forces such as earthquakes and landslides. However, due to the nature of McFarland's topography, there is relatively low risk for damages from soil and seismic related incidences. Therefore, the Redevelopment Alternative would be **similar** in comparison to the proposed Plan with regards to Geology and Soils.

6.5.2.7 Greenhouse gas emissions

The Redevelopment Alternative places an emphasis on infill of core areas of the City, a similar land use pattern to the proposed Plan. The compact development of this alternative would increase use of bicycling, walking, and public transportation use. However, under the Redevelopment Alternative, McFarland residents would continue to rely on single-occupancy vehicles. The proposed Plan would further decrease reliance and as a result, vehicle miles traveled. Therefore, the Redevelopment Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.5.2.8 Hazards & hazardous materials

Under the Redevelopment Alternative, lower levels of population and job growth are forecasted than in the proposed Plan. This would mean less development for housing and infrastructure than in the

aggressive growth alternatives, so there would be less risk from naturally occurring hazards, such as earthquakes. New development could possibly increase flood risk, but due to the minimal growth outlined under this alternative, it is unlikely that drainage patterns would change. Therefore, the Redevelopment Alternative is **similar** in comparison with the proposed Plan.

6.5.2.9 HYDROLOGY & WATER QUALITY

The Redevelopment Alternative assumes low levels of population and job growth. Little additional development would be required under this scenario, with an emphasis on infill in core areas of the City, which would have little impact on current drainage patterns in those areas. However, compared to the proposed Plan more development would be low density. Such development has the potential to increase the number of impervious surfaces, increasing runoff. Therefore, the Redevelopment Alternative would be a **slight deterioration** in comparison to the proposed Plan.

6.5.2.10 LAND USE

The Redevelopment Alternative would focus on moderate amounts of infill development in the City. The Redevelopment Alternative focuses development primarily on underutilized and vacant parcels within the existing City boundary with the option to expand through annexation as needed. However, development under the Redevelopment Alternative is centered on four major areas of growth: Downtown along 2nd Street, Highway 99 corridor, East side of Highway 99, Southern Highway Commercial. This is compared to the Preferred Growth Alternative covers a larger area of development. Therefore, the Redevelopment Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.5.2.11 MINERAL RESOURCES

Under the Redevelopment Alternative, the City of McFarland would implement less development than the proposed Plan. This would reduce the loss of land that could potentially yield mineral resources. However, due to the lack of known mineral resources within the City, the reduced development would not have a significant effect in comparison to the proposed plan. Therefore, the Redevelopment Alternative is **similar** in comparison to the proposed Plan with regards to mineral resources.

6.5.2.12 NOISE

The Redevelopment Alternative assumes the City of McFarland will develop at moderate rate, but at lower density, than when compared to the proposed Plan. Under this alternative, McFarland will grow by adding

mostly low-density development on the periphery, but higher densities in the core. This type of growth would impact noise similar or marginally less to that of the proposed Plan. Therefore, the Redevelopment Alternative is **similar** to that of the proposed Plan in regard to Noise.

6.5.2.13 Population & housing

Under the Redevelopment Alternative, the City will be required to house an additional 4,165 residents and 8,910 housing units by 2040, less than what is proposed in the Plan. This growth would be distributed in densities and locations. The majority of the growth would be single-family detached. Medium and high-density housing would be added near the center of McFarland. This alternative prioritizes vacant and underutilized parcels in the City, and to meet RHNA requirements with housing unit increases. Displacement of existing populations would be kept to a minimum. Given that this alternative prioritizes development of housing in McFarland at a moderate level of growth, this alternative would be **similar** in comparison to that of the Proposed Plan.

6.5.2.14 Public Services

The Redevelopment Alternative will be similar to the proposed Plan on its impacts to Public Facilities. While the Redevelopment Alternative will produce less demand as population and housing projections are lower, this alternative would see a slight increase in housing development and population that could possibly increase demand on certain public services such as Police Protection Services, Fire and Emergency Services and Schools. This alternative would not see the implementation of certain policies and programs that are outlined in the proposed Plan to ensure that demand can be met with population and housing projections. Therefore, the Redevelopment Alternative is **similar** in comparison to the proposed Plan.

6.5.2.15 Recreation

Under the Redevelopment Scenario, most of the vacant land outside of the City's core will not be developed or designated as open space. Vacant or underutilized parcels within the City's core will mostly be used for residential, commercial, or industrial development. The proposed Plan designates a portion of vacant land as open space and proposes a variety of recreational uses, such that the ratio of parks acreage per 1,000 people exceeds national standards. Therefore, the Redevelopment Scenario is a **slight deterioration** in comparison to the proposed Plan scenario.

6.5.2.16 TRANSPORTATION

The Redevelopment Alternative proposes fewer housing units and jobs, leading to the possibility of fewer trips in general than those projected for the proposed Plan. Although improvements to pedestrian, bicycle, and public transportation infrastructure and connectivity can enhance the circulation system and reduce the need for individuals to drive within the community, McFarland residents will continue to rely on single-occupancy vehicles. The Redevelopment Alternative will produce more vehicle miles traveled than the proposed Plan. Therefore, the Redevelopment Alternative is a **substantial deterioration** in the availability, convenience, and choice of alternative modes of transportation in comparison to the proposed Plan.

6.5.2.17 UTILITIES

The Redevelopment Scenario would see an increase of up to 4,165 residents and 8,910 housing units. This would likely increase pressure on water supply, water delivery, wastewater treatment and additional Utility Service Systems. Although the moderate growth would impose less of an impact on the utility services, the proposed Plan contains policies and programs to ensure that these systems will be able to meet demand for future growth. Therefore, the Redevelopment Alternative would be a **slight deterioration** in comparison to the proposed Plan.

6.5.2.18 ENERGY

The Redevelopment Scenario could result in an increase of up to 4,165 residents and 8,910 housing units which would likely increase energy consumption. While the scenario's focus on higher-density compact infill development could help reduce energy use from transportation, the Redevelopment Alternative would likely still result in more energy consumption than the proposed Plan. Therefore, the Redevelopment Alternative would be a **substantial deterioration** in comparison to the proposed Plan.

6.5.2.19 TRIBAL CULTURAL RESOURCES

Tribal cultural resources would be similarly affected by the Redevelopment Alternative compared to the proposed Plan. In the Redevelopment Alternative, policies, programs, and objectives, as well as Federal, State, and local regulations will apply to new growth and restoration. Therefore, the Redevelopment Scenario is **similar** in comparison to the proposed Plan.

6.5.2.20 WILDFIRE

Under the Redevelopment Alternative lower levels of population and job growth are forecasted than in the proposed Plan. This would mean less housing and infrastructure development than under the Plan so there would be less risk from urban structure fires and less impact on emergency response plans. However, the risk of wildfire in McFarland is relatively low, therefore, the Redevelopment Alternative is **similar** in comparison with the proposed Plan.

6.6 Smart Growth Alternative

6.6.1 PRINCIPAL CHARACTERISTICS

The Smart Growth Alternative accounts for the most aggressive population growth in the City of McFarland, maximizing infill within the City and new development outside of the existing City boundary to accommodate the maximum potential population, housing, and job growth. To preserve the small-town feel of McFarland, development will also focus on providing adequate open space close to newly proposed housing, pedestrian-friendly commercial districts, and placemaking through community design. This alternative identifies three key areas for growth of housing and jobs across the City:

- Downtown Infill
- Westside Expansion
- Highway 99 Improvements

Future growth of housing is concentrated in the Downtown Infill and Westside Expansion key growth areas. Future growth of jobs is focused along Highway 99, where land is designated for light and heavy industrial uses, as well as highway commercial retail and services to support job growth.

6.6.2 IMPACT DISCUSSION

The Smart Growth Alternative would have the following impacts relative to the proposed Plan.

6.6.2.1 AESTHETICS

The Smart Growth Alternative would result in similar types of development that is anticipated under the proposed Plan. The Progressive Growth Alternative would implement identical new policies and programs found in the proposed Plan that protect various visual resources character and resources in the City. In addition, there are existing protections of aesthetics found in the Municipal Code which will not be changed by the Smart Growth Alternative. Therefore, the Smart Growth Alternative is **similar** in comparison to the proposed Plan.

6.6.2.2 AGRICULTURAL RESOURCES

The Smart Growth Alternative would involve urban development on agricultural lands west of Highway 99 and on the northwest corner of the City of McFarland. This could potentially impact surrounding agricultural lands by introducing non-compatible uses. Overall, the extent of development and potential impacts to farmland acreage contained in the Smart Growth Alternative is similar to the proposed Plan. Therefore, the Smart Growth Alternative is **similar** in comparison to the proposed Plan in regard to agricultural resources.

6.6.2.3 AIR QUALITY

Under the Smart Growth Alternative, the City would undertake similar types of land use patterns as the proposed Plan. This alternative focuses on mixed-use infill development in core areas of the City. This places an emphasis on greater transportation mode split, resulting in lower emissions form private automobiles. Therefore, the Smart Growth Alternative is **similar** in comparison to the proposed Plan.

6.6.2.4 BIOLOGICAL RESOURCES

Under the Smart Growth Alternative, the City would experience similar amounts of development as the proposed Plan. Under this alternative, McFarland would experience rapid growth in population and number of jobs. In order to accommodate additional jobs and residents, the focus on moderate density infill development. These land use patterns mirror those of the proposed Plan. Therefore, the Smart Growth Alternative is **similar** to the proposed Plan.

6.6.2.5 Archeological and Historical resources

Archeological and Historical resources would be similarly affected by the Smart Growth Alternative compared to the proposed Plan. In the Smart Growth Alternative, policies, programs, and objectives, as well as Federal, State, and local regulations will apply to new growth and restoration. However, that does not change the resulting potentially significant and unavoidable impacts with respect to Archeological and Historical Resources. Therefore, the Smart Growth Scenario is **similar** in comparison to the proposed Plan.

6.6.2.6 Geology & soils

The Smart Growth Alternative would implement the same amount of development as the proposed Plan. This places the same amount of new development at risk of damage by geologic forces such as earthquakes and landslides. Therefore, the Smart Growth Alternative is **similar** compared to the proposed Plan with regard to Geology and Soils.

6.6.2.7 Greenhouse gas emissions

The Smart Growth Alternative would implement the same amount of development as the proposed Plan. The proposed transit network in the Smart Growth Alternative can help to accommodate people without access to private vehicles; proposed bicycle and pedestrian network for this alternative suggest improvements centered on improving non-motorized connectivity and safety. However, progressive policies and programs under the proposed Plan would even further decrease reliance on personal vehicle and further reduce vehicle miles traveled. Therefore, the Smart Growth Alternative would still result in more vehicle miles traveled and more emissions than the proposed Plan and thus a **slight deterioration** in comparison.

6.6.2.8 Hazards & hazardous materials

The Smart Growth Alternative prioritizes high-density, mixed use development and is similar to the proposed Plan. Increased growth and development would likely not increase flood risk as there is a focus infill development and high-density housing and a low risk of flood in McFarland. All development including new development would be subject to the existing The Kern County Multi-Hazard Mitigation Plan. Therefore, the Smart Growth Alternative is **similar** to the proposed Plan.

6.6.2.9 HYDROLOGY & WATER QUALITY

The Smart Growth Alternative proposes similar land use patterns as the proposed Plan. Under this scenario, development would consume much of the vacant land within the City. However, infill development would be a priority, decreasing the effects of development on drainage patterns and water quality. Therefore, the Smart Growth Alternative is **similar** to the proposed Plan.

6.6.2.10 LAND USE

The Smart Growth Alternative prioritizes high-density, mixed-use developments over new low-density development. This alternative allocates 850 acres of land for residential use to prepare for future housing needs and 280 acres of land for commercial use (including mixed-use) to appropriately prepare for future job growth. McFarland would retain its small-town character by providing adequate open space close to newly proposed housing, pedestrian-friendly commercial districts, and placemaking through community design. Therefore, the Smart Growth Alternative is a **slight deterioration** in comparison to the proposed Plan.

6.6.2.11 MINERAL RESOURCES

Under the Smart Growth Alternative, the City of McFarland would implement similar development to the proposed Plan. Due to the lack of known mineral resources within the City, the reduced development would not have a significant effect in comparison to the proposed plan. Therefore, the Redevelopment Alternative is **similar** in comparison to the proposed Plan with regards to mineral resources.

6.6.2.12 NOISE

The Smart Growth Alternative assumes that the City of McFarland will undergo similar growth compared to the proposed Plan, adding sources of noise. Under this alternative, McFarland will build-out vacant land and increase commercial and industrial activity along Highway 99 and expand the Sphere of Influence. Together, these combine to add sources of noise at specific higher density locations of different land-uses, and increases in background noise, when compared to the Preferred Growth Alternative. Despite these increases, policies and programs from the proposed Plan would be available to mitigate noise impacts including ensuring compatible land uses are developed near each other. Additionally, projects that would major noise sources would undergo a CEQA review as required by state law. Therefore, the Smart Growth Alternative is **similar** to that of the proposed Plan in regard to Noise.

6.6.2.13 Population & housing

The Smart Growth Alternative assumes a housing increase of 10,630 new homes and a population increase of 33,220 residents and 9530 new residents and by 2040. When compared with the Preferred Growth Alternative, this growth would come by build-out of development on McFarland's vacant land. More of the proposed development acreage would be low-density than when compared to the proposed Plan. The Smart Growth Alternative would easily meet the City's RHNA requirements. Therefore, this alterative is **similar** to that of the Proposed Plan in regard to population and housing.

6.6.2.14 Public Services

Under the Smart Growth Scenario, population and housing projections are the same as in the proposed Plan. This alternative would likely have an effect on demand required by Public Services similar to the proposed Plan. Build-out in this plan would be similar to that of the proposed Plan. Therefore, the Smart Growth Alternative would be **similar** to the proposed Plan.

6.6.2.15 Recreation

Under the Smart Growth Scenario, recreational facilities will be largely the same as in the proposed Plan. As such, the ratio of park acreage per 1,000 people will exceed national standards. To preserve the small-town feel of McFarland, the Smart Growth Plan ensures adequate open space close to newly proposed housing. Therefore, the Smart Growth Scenario is **similar** in comparison to the proposed Plan.

6.6.2.16 Transportation

The Smart Growth Alternative proposes similar housing units and jobs. The additional vehicles and resulting vehicle miles traveled increase would result in additional significant impacts to transportation and traffic. Policies and programs that enable non-motorized vehicle transportation are available in the Smart Growth Alternative, however vehicle miles traveled are still more than that under the Preferred Growth Alternative. Therefore, this the Smart Growth Alternative would be **similar** to that of the proposed Plan.

6.6.2.17 Utilities & services

Under the Smart Growth Scenario, population and housing projections will require an increase in service demand for Utility Service System. As housing, job and population projections are similar to the proposed Plan, this demand on Utility Service Systems will be similar. Therefore, this alternative would be **similar** to the proposed Plan.

6.6.2.18 Energy

The Smart Growth Scenario proposes similar housing units and jobs. Policies and programs that enable non-motorized vehicle transportation are available in the Smart Growth Alternative, however, transportation related energy use would still likely be greater than under the proposed Plan. Therefore, the Smart Growth Alternative would be a **slight deterioration** in comparison to the proposed Plan.

6.6.2.19 Tribal Cultural Resources

Tribal cultural resources would be similarly affected by the Smart Growth Alternative compared to the proposed Plan. In the Redevelopment Alternative, policies, programs, and objectives, as well as Federal, State, and local regulations will apply to new growth and restoration. Therefore, the Redevelopment Scenario is **similar** in comparison to the proposed Plan.

6.6.2.20 Wildfire

The Smart Growth Alternative prioritizes high-density, mixed use development and is similar to the proposed Plan. Increased growth and development would likely not increase wildfire risk as there is a low risk of wildfire in McFarland. All development including new development would be subject to the existing The Kern County Multi-Hazard Mitigation Plan. Therefore, the Smart Growth Alternative is **similar** to the proposed Plan.

7 CEQA Mandated Sections

This chapter provides an overview of the impacts of the proposed McFarland 2040 General Plan based on subject areas specifically required by CEQA, including significant irreversible environmental changes, significant unavoidable impacts, growth-inducing impacts, cumulative impacts, and impacts found not to be significant. These findings, and a detailed analysis of the effects of the proposed Plan would have on the environment as well as proposed mitigation measures to minimize significant impacts, is provided in Chapter 4, sections 4.1 through 4.20.

7.1 Impacts Found Not to be Significant

CEQA Guidelines Section 15128 allows environmental issues for which there is no likelihood of significant impact to be "scoped out" and not analyzed further in the EIR; however, all environmental issues are addressed within this EIR as they are potentially exacerbated by the buildout of the proposed Plan.

7.2 Significant Irreversible Changes

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which a proposed project or plan would commit nonrenewable resources to uses that future generations would probably be unable to reverse. These irreversible changes could include land use changes, irreversible damage from environmental accidents, or a large commitment of non-renewable resources. The three CEQA required categories of irreversible changes are discussed below.

7.2.1 Land Use Changes that Commit Future Generations

The proposed Plan outlines Land Use changes that would potentially commit future generations in Chapter 3. As stated, the majority of new development and land uses are located within five key growth areas largely made up of vacant land and infill development land. The Plan would lead to a drastic decrease of vacant land within the City and land changes for other uses (such as residential, commercial, industrial, health services, and education) would increase. While the land uses proposed in the Plan are a mixture of residential and various land uses, the Plan seeks to maintain land use changes that serve the needs of residents.

7.2.2 Irreversible damage from environmental accidents

The proposed Plan could potentially have irreversible change to the physical environment. This could occur due to accidental release of hazardous materials associated with development activities. The proposed Plan contains goals, policies and actions outlined in Chapter 4.8: Hazards and Hazardous Materials, which would reduce the potential impact to a less than significant level. No additional irreversible environmental damage is expected from the proposed Plan and the Plan contains sufficient goals, policies, and actions to reduce environmental impacts for each section of the proposed Plan.

7.2.3 Large commitment of non-renewable resources

CEQA Guidelines require the EIR to consider whether "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely" (CEQA Guidelines Section 15126.2(c)). "Nonrenewable resource" refers to the physical features of the natural environment, such as land, waterways, etc. Irreversible commitments of non-renewable resources associated with the proposed McFarland 2040 General Plan include:

- Air Quality
- Water Consumption
- Energy Sources
- Farmland Consumption
- Construction-Related Impacts

Air Quality

Build-out of the proposed Plan would potentially contribute to long-term degradation of air quality and atmospheric conditions regionally due to increases from automobile related sources. Growth from development of the proposed Plan is likely to increase the demand for both trips taken and vehicle miles traveled. However, improvements in vehicle technology, commercial and industrial machinery, and the Plan's focus in making non-automobile transportation a priority, may lower the rate of air quality degradation over time.

Water Consumption

The groundwater supply of the City of McFarland is limited by the supply of four major wells. Development from the build-out of the proposed Plan will increase demand for groundwater usage in the City. This

demand and the resulting consumption of McFarland's groundwater supply represents an irreversible change to the groundwater supply.

Energy Sources

Increased operation of residential and commercial buildings, in addition to energy from transportation, will be a significant source of energy usage. Both residential and nonresidential developments from the build-out of the proposed Plan will use nonrenewable resources such as natural gas and petroleum products for power, lighting, heating, cooling, ventilation, and other indoor and outdoor services. In transportation, an increase in trips and vehicle miles traveled will use both oil and gas. However compact development, progressive transportation policies, and sustainability and conservation efforts in the proposed Plan will reduce energy use compared to all other alternatives.

Farmland Consumption

Any conversion of farmland to urban uses would represent a permanent change in the land use and a loss of the resource. Development of farmland parcels is included in the build-out of the proposed Plan. However, policies and programs in the Plan will help to mitigate impacts to agricultural land. There are no irreversible changes to the farmland in the McFarland planning area.

Construction-related Impacts

Through buildout of the proposed Plan, development in the City of McFarland can cause significant environmental changes over the course of construction. Construction-related impacts involve the depletion of resources such as lumber, and gravel. Programs and policies from the proposed Plan that would reduce construction-related impacts include replacement of any trees removed during construction.

7.3 Growth Inducing Impacts of the Proposed Plan

An EIR requires examination of growth-inducing impacts of the proposed General Plan. Section 15126.2(d) of the CEQA Guidelines requires a discussion of the ways 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. It also requires that this discussion include any removal of barriers to population growth, such as expansion of city sewer infrastructure or transportation systems.

7.3.1 Projected Growth

Population is expected to increase by people to a total of 9,530 people by 2040. This is an overall increase of 82% from the 2015. Population growth translates to households which indicates the need for up to 10,640 housing units in the City. In addition, the projection shows increase in number of people in the 25 to 39-year-old age group, which suggests increasing the quantity and variety of job opportunities to a total of 17,195 jobs by 2040. Economic growth areas include Revitalized Downtown, West Expansion, Whisler Road Neighborhood, Southern Commercial Corridor, and Famoso Industrial and Commercial Center.

7.3.2 Boundaries and Limits

The proposed Plan calls for the expansion of the McFarland Sphere of Influence to include more residential, commercial, industrial, and agricultural lands. The City of McFarland does not border any other cities, but borders agricultural lands on all sides, including Williamson Act lands. These natural obstructions and land use restrictions present barriers to outward growth. In addition, Highway 99 divides McFarland into western and eastern sides, which restricts active transportation movement across the highway. The City's Sphere of Influence (SOI) extends well beyond the City limits in most directions. The Local Agency Formation Commission (LAFCO) is responsible for approving a SOI and the City has been in discussions with LAFCO to expand its SOI.

7.3.3 Water Supply

In regard to the Plan's Preferred Growth Scenario, water supply may be a limiting factor for growth in the City of McFarland. McFarland has four major wells. The Plan's preferred Growth Scenario may have an effect on these water supplies. McFarland is near the use of the full capacity of its water supply with approximately 7.43 million gallons of water available per day. Although McFarland's potable water resources are sound, population growth projected in the Preferred Growth Scenario would require additional water capacity. It may be difficult to expand facilities in McFarland requiring increased conservation. Continuing to monitor water quality is also important as the community continues to grow. The Preferred Plan prioritizes water conservation but will need to continue to explore other sources of water.

7.3.4 Wastewater

The increase in population and development under the Preferred Growth scenario would require an expansion of McFarland's wastewater treatment facility as outlined in the Plan. The Preferred Growth

scenario anticipates growth and development in both east and west McFarland, which would require an expansion of the McFarland wastewater system that serves the mainly western half of the City.

7.3.5 Storm water

Increased development proposed in the Preferred Growth Scenario needs to address infrastructure requirements to adequately capture and divert storm water to reduce the risk of urban flooding. Proposed roadway expansion and particularly commercial and industrial development along Highway 99 will likely necessitate an increase in parking and impervious surfaces that may impact the current flow of storm water. The City's storm water infrastructure may need to be evaluated as more severe weather events continue to impact the region. Additionally, the City's current drainage and conveyance systems will need to be expanded to serve the increased population and proposed new development. The Plan prioritizes alignment with the City of McFarland's Storm Drain Master Plan which consider the development of three new sump basins.

7.4 Cumulative Impacts of the Proposed Plan

7.4.1 Aesthetics

In the Preferred Growth Alternative, aesthetics focusses on the creation of a City that is both attractive and functional. Development focuses on the downtown neighborhood and features complete streets accessible to all road users. Improved signage, crossings, and lighting are to contribute to improved safety and comfort within the City. Landscaping and entryways are to promote methods of wayfinding and improve the aesthetic appearance of McFarland. Design standards can work towards the creation of a uniform image for McFarland to attract visitors and please residents. Therefore, the cumulative contribution of the proposed Plan is less than cumulatively considerable.

7.4.2 Agricultural Resources

McFarland's primary resource is the vast agricultural lands that surround the City. Under the Preferred Growth Alternative, some urban lands under temporary agricultural use are to be returned to development to accommodate the growth of residential, commercial, industrial, highway commercial, and recreational open space. To the south of the City, some agricultural lands are to be converted to commercial use to boost the City's aspirations for job growth but narrowing the SOI on the upper west side compensates with conservation of prime farmland. Therefore, the cumulative contribution of the proposed Plan is less than cumulatively considerable.

7.4.3 Air Quality

The Preferred Growth Alternative presents many strategies that can reduce per capita pollutants and GHG emissions, such as increasing accessibility and connectivity for pedestrians and bicyclists, investing in renewable energy, and improving public transit. Keeping the main form of McFarland compact with infill development, building mixed-use commercial, and neighborhood commercial areas can increase opportunities to walk or bike and thereby reduce greenhouse gas emissions and help combat climate change. These efforts will result in a projected decrease in air pollution and greenhouse gas emissions compared to all alternatives. Therefore, the cumulative contribution of the proposed Plan is less than cumulatively considerable.

7.4.4 Biological Resources

Impacts to biological resources are less than cumulatively considerable, as there will be no impacts resulting from the proposed Plan that would be significant in combination with projects or programs in the surrounding area.

7.4.5 Cultural: Archeological and Historical Resources

The proposed Plan is not expected to have any significant impacts to historical, archaeological, or paleontological resources, nor is it expected to have any impact on human remains. However, if any cultural resources were to be found on a project site during development in the proposed Plan, impacts may be both significant and unavoidable.

7.4.6 Geology and Soils

Population growth and new development set forth by the proposed Plan would increase the number of buildings and residents exposed to seismic hazards and hazards associated with soils. However, compliance with the California Building Code for new developments, as required by the proposed Plan, would decrease the risk associated with these hazards. Therefore, the cumulative contribution of the proposed Plan is less than cumulatively considerable.

7.4.7 Greenhouse Gas Emissions

Impacts associated with greenhouse gases are less than cumulatively considerable, as there will be fewer emission resulting from the proposed Plan than any other alternative.

7.4.8 Hazards and Hazardous Materials

Impacts associated with hazards and hazardous materials are less than cumulatively considerable, as there will be no impacts resulting from the proposed Plan that would be significant in combination with projects or programs in the surrounding area.

7.4.9 Hydrology and Water Quality

Impacts associated with hydrology and water quality are less than cumulatively considerable, as there will be no impacts resulting from the proposed Plan that would be significant in combination with projects or programs in the surrounding area.

7.4.10 Land Use

Impacts associated with land use are less than cumulatively considerable, as there will be no impacts resulting from the proposed Plan that would be significant in combination with projects or programs in the surrounding area. There are no other substantial land use changes occurring in the Planning Area.

7.4.11 Mineral Resources

Impacts associated with mineral resources are less than cumulatively considerable, as there will be no impacts resulting from the proposed Plan that would be significant in combination with projects or programs in the surrounding area. There are no other substantial land use changes occurring in the Planning Area.

7.4.12 Noise

Future population growth and economic development in the City of McFarland would increase the amount of people, and traffic moving in and out of the City, leading to increases in ambient noise. Policies within the proposed Plan prioritize land uses that would attract people to both live and work in the City of McFarland, thus decreasing noise levels from automobiles in the surrounding area. Therefore, the cumulative contribution of the proposed Plan is less than cumulatively considerable.

7.4.13 Population and Housing

The proposed Plan will not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure. Population growth is accommodated with greenfield or infill development that is dense, compact, and mixes land uses. The proposed Plan will also not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. The proposed Plan satisfies the required number of housing units, including affordable housing units, by providing a potential number of housing units that can be accommodated at full buildout that is greater than the required number of housing units. Finally, the proposed Plan will not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. All policies and programs under Goal 3 of the Housing Element of the proposed Plan are intended to prevent the displacement of households due to the construction of new development by maintaining and improving the existing housing inventory. The cumulative impact from the proposed Plan on population and housing is less than significant.

7.4.14 Public Services

The proposed Plan outlines increased population, job, and housing growth. This would necessitate increased public services including Fire and Emergency Services, Police Services, Schools, Parks and Library Services. The proposed Plans contains policies and actions that would ensure that Public Services maintain an acceptable service ration and response time. Additionally, any cumulative impacts related to the expansion of public services, such as Parks, would be mitigated to a level that is not significant.

7.4.15 Recreation

Impacts to or from recreational facilities are less than cumulatively considerable, as there will be no impacts resulting from the proposed Plan that would be significant in combination projects or programs in the surrounding area. The proposed Plan will increase recreational opportunities and open space preservation within the Planning Area.

7.4.16 Transportation

The proposed Plan will serve as the constitution of the City of McFarland. Any projects that are proposed within McFarland's City limits will be subject to review and conformity with the proposed Plan's goals, objectives, policies, and programs. The proposed Plan itself emphasizes reducing the cumulative impacts to the circulation network by compacting development and promoting the use of alternative modes of transportation (e.g., walking, bicycling, and transit) as opposed to relying solely on automobile transportation. As such, any cumulative impacts of projects implemented under the proposed Plan will be mitigated to a level that is not significant.

7.4.17 Utilities

New development and housing to accommodate population growth outlined in the Plan and housing projections will require an expansion of Utility Service Systems such as Water Service, Sewer Service, Stormwater Drainage and Solid Waste. The proposed Plan will increase demand for all of these utilities but contains policies and actions to ensure service levels are met for new housing and development. Additionally, compliance with State regulations mandated by the Regional Water Quality Control Board regarding Stormwater Drainage and Sewer Service (Wastewater Treatment), in addition to mitigation measures outlined in this document will ensure that cumulative impacts are not significant. As such, any cumulative impacts regarding utilities are not significant and that future demand is met.

7.4.18 Energy

Population growth and development under the proposed Plan will increase demand for energy. Policies under and actions aimed at reducing energy consumption help to mitigate the impacts. Additionally, compact land use and sustainable transportation efforts within the Plan can further reduce the impact to energy use. As such, any cumulative impacts regarding energy are not considerable.

7.4.19 Tribal Cultural Resources

The proposed Plan is not expected to have any significant impacts to tribal cultural resources, nor is it expected to have any impact on human remains. However, if any cultural resources were to be found on a project site during development in the proposed Plan, impacts may be both significant and unavoidable.

7.4.20 Wildfire

The proposed Plan's impact on wildfires are not significant as the risk of wildfire remains low in McFarland. Population growth and new development set forth by the proposed Plan would increase the number of buildings and residents exposed to fires. However, compliance with the California Building Code for new developments, as required by the proposed Plan, would decrease the risk associated with these fires. Therefore, the cumulative contribution of the proposed Plan is less than cumulatively considerable.

8 Organizations and Persons Contacted

8.1 Lead Agency

City of McFarland

Maria Lara
City Manager
City of McFarland
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McFarland, CA 93250

8.2 Agencies and Persons Consulted

State Agencies

CA Dept. of Conservation
CA Dept. of Fish and Wildlife
CA Dept. of Food & Agriculture
CA Dept. of Forestry and Fire Protection
CA Dept. of Housing and Community Development
CA Dept. of Parks and Recreation
CA Dept. of Resources Recycling and Recovery
CA Dept. of Toxic Substances Control
CA Dept. of Water Resources
California Air Resources Board
California Emergency Management Agency
California Native American Heritage Commission
California Natural Resources Agency
California Office of Historic Preservation
California Office of Planning and Research State Clearinghouse
California Public Utilities Commission
CALTRANS District 5
CALTRANS District 6
CALTRANS Planning
Central Valley Regional Water Quality Control Board

Local Agencies

City of Delano
City of McFarland
City of Wasco
Delano Mosquito Abatement District
Kern Community College District
Kern Council of Governments
Kern County Area LAFCO
Kern County Dept. of Agriculture and Dept. of Weights & Measures
Kern County Dept. of Fish & Game
Kern County Dept. of Planning and Natural Resources
Kern County Dept. of Public Health Services
Kern County Dept. of Public Works
Kern County Historical Society
Kern County Transit
Kings County
McFarland Recreation and Park District
McFarland Unified School District
San Joaquin Valley Air Pollution Control District
Southern San Joaquin Municipal Utility District
Tulare County Administrative Office
Tulare County Board of Supervisors

Other Agencies

AT&T
PG&E
Southern California Edison
Spectrum
Union Pacific Railroad

8.3 Report Preparers and Qualifications

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Alexandra Lee-Gardner, BS
Candidate for Master's in Civil Engineering, California Polytechnic State University, San Luis Obispo
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9 Appendix

9.1 Appendix to Section 1.6 – Areas of Controversy

Comment Letters on Notice of Preparation

1. Native American Heritage Commission (NAHC)
2. California Department of Conservation (DCON)
3. Southern San Joaquin Municipal Utility District (SSJMUD)
4. Department of Toxic Substances Control (DTSC)

Native American Tribal Consultation

5. Invitation Letter
6. Native American Tribal Consultation List & Responses
7. Sacred Lands File Search With List of Tribes

9.1.1 NATIVE AMERICAN HERITAGE COMMISSION (NAHC)

STATE OF CALIFORNIA Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

April 14, 2021

Maria Lara, City Manager
City of McFarland
401 West Kern Ave.
McFarland, CA 93250

Governor's Office of Planning & Research

APR 19 2021

STATE CLEARINGHOUSE

Re: 2021040288, 2040 General Plan for the City of McFarland Project, Kern County

Dear Ms. Lara:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

NAHC 1

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

NAHC 2

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

NAHC 3

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

NAHC 4

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

NAHC 5

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

NAHC 6

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

NAHC 7

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

NAHC 8

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

NAHC 9

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

NAHC 10

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).

NAHC 11

2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.

3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).

4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:

- **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

NAHC 12

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

NAHC 13

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:

- **a.** If part or all of the APE has been previously surveyed for cultural resources.
- **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
- **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
- **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

NAHC 14

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
- **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

NAHC 15

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

NAHC 16

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

9.1.2 CALIFORNIA DEPARTMENT OF CONSERVATION (DCON)

California
Department of Conservation
Division of Land Resource Protection

Gavin Newsom, Governor
David Shabazian, Director

MARCH 17, 2021

VIA EMAIL: MLARA@MCFARLANDCITY.ORG
City of McFarland
Attn: Maria Lara, City Manager
401 West Kern Avenue
McFarland, CA 93250

Dear Ms. Lara:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE CITY OF MCFARLAND'S 2040 GENERAL PLAN

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of an Environmental Impact Report for the City of McFarland's 2040 General Plan (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The 2040 McFarland General Plan is intended to represent the general expectations and wishes of its residents and decision-makers concerning future land use patterns and resource management. The Plan seeks to provide a variety of residential densities, mixed-use areas, a diverse economic base, and improved connections throughout the City. This vision is reflected throughout the General Plan. The plan continues to provide that new housing and commercial enterprises are generally directed to areas that are suitable for development or are already developed.

The 2040 General Plan ensures that important land use decisions are scrutinized for their potential to affect the quality of life and the environment. Implementation of the General Plan requires a balance between potentially competing interests. It is expected that future decision-makers will need to wrestle with potential trade-offs and compromises, such as maintaining a balance of housing choices, stimulating a growing economy, and protecting the natural environment. The General Plan provides the policy guidance needed to assist future decision-makers in evaluating these tradeoffs and striking a desirable balance.

DCon 1

State of California Natural Resources Agency | Department of Conservation
801 K Street, MS 14-15, Sacramento, CA 95814
conservation.ca.gov | T: (916) 324-0850 | F: (916) 327-3430

Department Comments

DCon 2 The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. The City has recognized this fact and framed many of its agricultural policies and programs around this fact, encouraging the protection and preservation of agricultural land. The Department urges the City to display this commitment by implementing its own Agricultural Mitigation Program.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Conclusion

Thank you for giving us the opportunity to comment on the Notice of Preparation of an Environmental Impact for the City of McFarland's 2040 General Plan. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber

Conservation Program Support Supervisor

9.1.3 SOUTHERN SAN JOAQUIN MUNICIPAL UTILITY DISTRICT (SSJMUD)

SSJMUD

Southern San Joaquin Municipal Utility District

ADDRESS

P. O. Box 279
Delano, CA 93216

PH: 661-725-0610
Fax: 661-725-2110

Email
Roland@ssjmud.org

February 10, 2021

Maria Lara, City Manager
City of McFarland
401 West Kern Ave.
McFarland, CA 93250

Dear Ms. Lara:

Southern San Joaquin Municipal Utility District (SSJMUD or the District) has reviewed the City's Draft 2040 General Plan and the Draft Sustainable Agriculture Element. The City is located within the District and, while the District does not provide service to the City for the delivery of imported water supply, the District's participation in local and regional groundwater banking and importation of surface water supplies benefit the City by reducing groundwater usage and maintaining groundwater levels in the City's municipal supply wells. The District also works with the City for compliance with the California Sustainable Groundwater Management Act (SGMA). The District adopted a Management Area Plan under the Kern Groundwater Authority's Groundwater Sustainability Plan (KGA GSP), which included both the City of McFarland and the City of Delano. This plan described the existing groundwater conditions within the District and the cities, established criteria for sustainable groundwater management, and identified projects and management actions to assist the Kern County Subbasin (the Subbasin) in reaching groundwater sustainability by 2040.

Comments on the Draft 2040 General Plan

Development of the District's Management Area Plan for the KGA GSP also included consideration of existing planning documents within the District. The planning documents considered in the GSP included the City's current General Plan, specifically those objectives and policies in the Conservation Element. It is noted that the City has maintained the objectives and policies previously identified for water conservation and demand reduction and has further updated this element to account for the implementation of SGMA.

SSJMUD 1

The City has added Program SAF 2.4.1.4 to "enact new measures as needed according to protocols established by the Kern Water Authority (*sic*)." The protocols cited previously are found in the Kern Groundwater Authority (KGA) GSP. Further, while KGA is the Groundwater Sustainability Agency (GSA) responsible for the GSP, KGA's member agencies (which include SSJMUD) are responsible for SGMA implementation within their respective Management Areas. The City of McFarland is therefore subject to the conditions of the KGA GSP and the SSJMUD Management Area Plan. In this General Plan Update, the City has not made specific mention of the SSJMUD Management Area Plan or the KGA GSP.

Localized impacts as measured at the Representative Monitoring Sites identified in the KGA GSP are of chief concern to the District and KGA. These impacts are to be avoided

SSJMUD 2

to prevent the District and the Subbasin from violating SGMA. The District encourages the City to coordinate on the implementation of SGMA via participation in monitoring of groundwater conditions within the District's plan area. The City is currently subject to the KGA GSP and the SSJMUD Management Area Plan, which were adopted in December 2019 and submitted to DWR in January 2020.

SSJMUD 3

The City has also included Policy SAF 2.4.3 which states that the City will "identify groundwater recharge locations where soil and geography allow for infiltration." This policy goes on to state that the City will "pursue grants to aid long term groundwater recharge projects" and "examine proposed public infrastructure projects for potential water recharge opportunities." SSJMUD is generally supportive of this policy and welcomes the opportunity to work with the City to achieve long-term success in groundwater recharge to better manage local and regional water resources. However, as the City does not currently have an imported water supply, this Policy raises the question of where the City will obtain supplies for its proposed recharge activities and how the City plans to deliver water to these proposed facilities.

Program PF 1.2.2.2 states that the City plans to expand sewer facilities in eastern McFarland. This expansion would include the construction of a new wastewater treatment plant (WWTP). The KGA GSP identifies nitrate as a constituent of concern; it is generally observed that high nitrate concentrations in the first occurrence of groundwater are found in wells located in areas with a high density of septic systems. Reducing residential reliance on septic systems for disposal of domestic wastewater would result in a decrease in the volume of nitrate introduced to the first occurrences of groundwater within the District and assist in the preservation of groundwater quality within the District. Additionally, a new WWTP could also be a source of treated water for beneficial reuse for crop irrigation. Treated wastewater effluent for beneficial reuse would offset additional groundwater pumping. As this proposed program would result in protection of groundwater quality and a source of beneficially reusable water, the District supports the development of a new WWTP on the eastern side of the City.

Comments on Sustainable Agriculture Element

At the time that the KGA GSP and SSJMUD Management Area Plan were prepared, there was not a Sustainable Agriculture element. The City of McFarland has prepared a draft Sustainable Agriculture Element for its 2040 General Plan. As one of the major economic sectors for the City, this element provides planning to maintain and support agricultural activities and protect the natural resources used in agriculture within the City's limits and its Sphere of Influence (SOI). Among the considerations in this element are land use and groundwater management.

The Sustainable Agriculture Element acknowledges the KGA GSP, in addition to other statewide policies and laws for the protection of agriculture and natural resource sustainability. Among these are the California Agriculture Vision (2017), the California Land Conservation Act (also known as the Williamson Act), and SGMA. This element provides an overview of SGMA and a description of the six undesirable results defined by SGMA.

SSJMUD 4

While the City's Sustainable Agriculture Element is focused on discussion of the preservation of high-quality productive soils for agricultural use, no consideration given to the conversion of uncultivated or fallowed land into permanent groundwater recharge. Such land conversion activities would assist both the City and the District in meeting

their concurrent and coequal goals of groundwater sustainability and land conservation. The conversion of uncultivated or fallowed land would allow for the City to engage in water demand reduction within its SOI and also provide locations for permanent groundwater recharge activities to augment groundwater supply.

Policy AG 3.1.1 states that the City will encourage water-saving measures and user education in McFarland and sphere of influence to reduce water use in farming. Demand reduction measures are one of the ways through which the Subbasin will reach sustainability. Through participation in communication and stakeholder outreach activities, the City can achieve this goal as a part of its SGMA implementation with the District.

SSJMUD 5

Program AG 3.1.2.2 states that the City will cooperate with agricultural industry stakeholders in the City and its Sphere of Influence to promote drought readiness measures. The District recommends that the City also work in collaboration with the District, using the SSJMUD Management Area Plan and KGA GSP as a starting point for discussing and developing these drought readiness measures.

SSJMUD 6

Objective 10.3 states that the City will encourage the use of recycled water. One major source of recycled water currently provided by the City is its WWTP, located in the boundaries of the North Kern Water Storage District (North Kern). The treated effluent from the WWTP is has a beneficial reuse as a source of irrigation water for permanent tree crops and/or hay and pasture. The District is supportive of this continued beneficial reuse and encourages the expansion of the use of recycled water as additional WWTP effluent becomes available.

In its review of the City's General Plan Update and Sustainable Agriculture Element, the District finds that many of the policies, programs, and objectives are consistent with what has been adopted in the KGA GSP and the SSJMUD Management Area Plan. The District expects that the City will continue to work with SSJMUD to implement SGMA and address the issues arising from groundwater sustainability within the District and the Subbasin at large. As with the development of its Management Area Plan, SSJMUD is available for collaboration in implementing these policies and programs and providing guidance to the City with respect to SGMA.

Please contact us with any questions or concerns.

Sincerely,

Roland Gross
General Manager, Southern San Joaquin Municipal Utility District

9.1.4 DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC)

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

April 13, 2021

Ms. Maria Lara
City of McFarland
401 West Kern Ave.
McFarland, CA 93250
MLara@mcfarlandcity.org

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT ON THE 2040 MCFARLAND GENERAL PLAN – DATED APRIL 8, 2021 (STATE CLEARINGHOUSE NUMBER: 2021040288)

Ms. Lara:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation of a Draft Environmental Impact Report (EIR) for the 2040 McFarland General Plan (Project). The Lead Agency is receiving this notice from DTSC because the Project includes one or more of the following: groundbreaking activities, work in close proximity to a roadway, work in close proximity to mining or suspected mining or former mining activities, presence of site buildings that may require demolition or modifications, importation of backfill soil, and/or work on or in close proximity to an agricultural or former agricultural site.

DTSC recommends that the following issues be evaluated in the EIR Hazards and Hazardous Materials section:

DTSC 1

1. The EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.
2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline

DTSC 2

contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil DTSC, recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the EIR.

DTSC 3

3. If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/aml_handbook.pdf).

DTSC 4

4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers* (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118.pdf).

DTSC 5

5. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf).

DTSC 6

6. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Ag-Guidance-Rev-3-August-7-2008-2.pdf).

DTSC appreciates the opportunity to comment on the EIR. Should you need any assistance with an environmental investigation, please submit a request for Lead

Agency Oversight Application, which can be found at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/VCP_App-1460.doc. Additional information regarding voluntary agreements with DTSC can be found at: https://dtsc.ca.gov/brownfields/.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

Sincerely,

Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

9.1.5 NATIVE AMERICAN TRIBAL CONSULTATION

9.1.5.1 SAMPLE NATIVE AMERICAN TRIBAL CONSULTATION LETTER

City of McFarland, CA

THE CITY OF
McFarland
TRADITION • UNITY • EXCELLENCE

401 W. Kern Avenue
McFarland, CA 93250
661-792-3091 Office
6610792-3093 Fax

December 14, 2020

James Rambeau, Sr., Chairperson
Big Pine Paiute Tribe of the Owens Valley
P.O. Box 700
Big Pine, CA 93513
(760) 938-2003
j.rambeau@bigpinepaiute.org

Dear James Rambeau, Sr

In accordance with the State of California Tribal Consultation Guidelines and Government Code §65352.3, this letter officially invites the Tribe to participate in consultation regarding the City of McFarland 2040 General Plan update. Consultation is intended to ensure that California Native American tribes are given 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 and also allows for consideration of cultural places in the context of broad local land use policy before individual, site-specific, project-level land use decisions are made.

The General Plan represents the official adopted goals, objectives, policies, and programs of the City of McFarland. A map of the area, including the proposed City Limits, Sphere of Influence, and Area of Concern is attached (and more detailed maps can be provided upon request). The General Plan is central to the local planning process because it employs public policy, derived from citizen participation, to shape the future development of the community. General Plans are required by law to be updated every 10-15 years, and the last City of McFarland General Plan went into effect in 1991, so 2016 marked the 15-year mark. The City of McFarland 2040 General Plan was produced for the City of McFarland as part of the McFarland General Plan Update project by the 2019-20 Community and Regional Planning Studio class of the Master of City and Regional Planning Program at the California Polytechnic State University, San Luis Obispo, California. The draft is under review by the Planning Commission and City Council and an environmental impact report, which includes an examination of cultural resources, will now be prepared for the document.
You can find a copy of the **Draft 2040 General Plan** at:

http://mcfarlandcity.org/DocumentCenter/View/2200/Vol2_McFarland-Draft-General-Plan_November-2020

You can find **other related planning documents** at:
http://mcfarlandcity.org/237/Community-Development

Upon receipt of this letter, the Tribe has 90 days to respond with a request for consultation which, if received by December 15th, 2020, would be March 15th, 2021. Please send the request to City Manager at the address below:

City of McFarland
Attn: Maria Lara, City Manager, mlara@mcfarlandcity.org
401 West Kern Ave
McFarland, CA 93250

Technical reports, such as cultural resource and archaeological reports, will be available later in the Environmental Impact Report process. Meanwhile, searches of archeological and cultural resources revealed the following:

The Native American Heritage Commission (NAHC) has conducted its search in December 2020 for **archaeological resources** and concluded as follows:
*"The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was **negative**."*

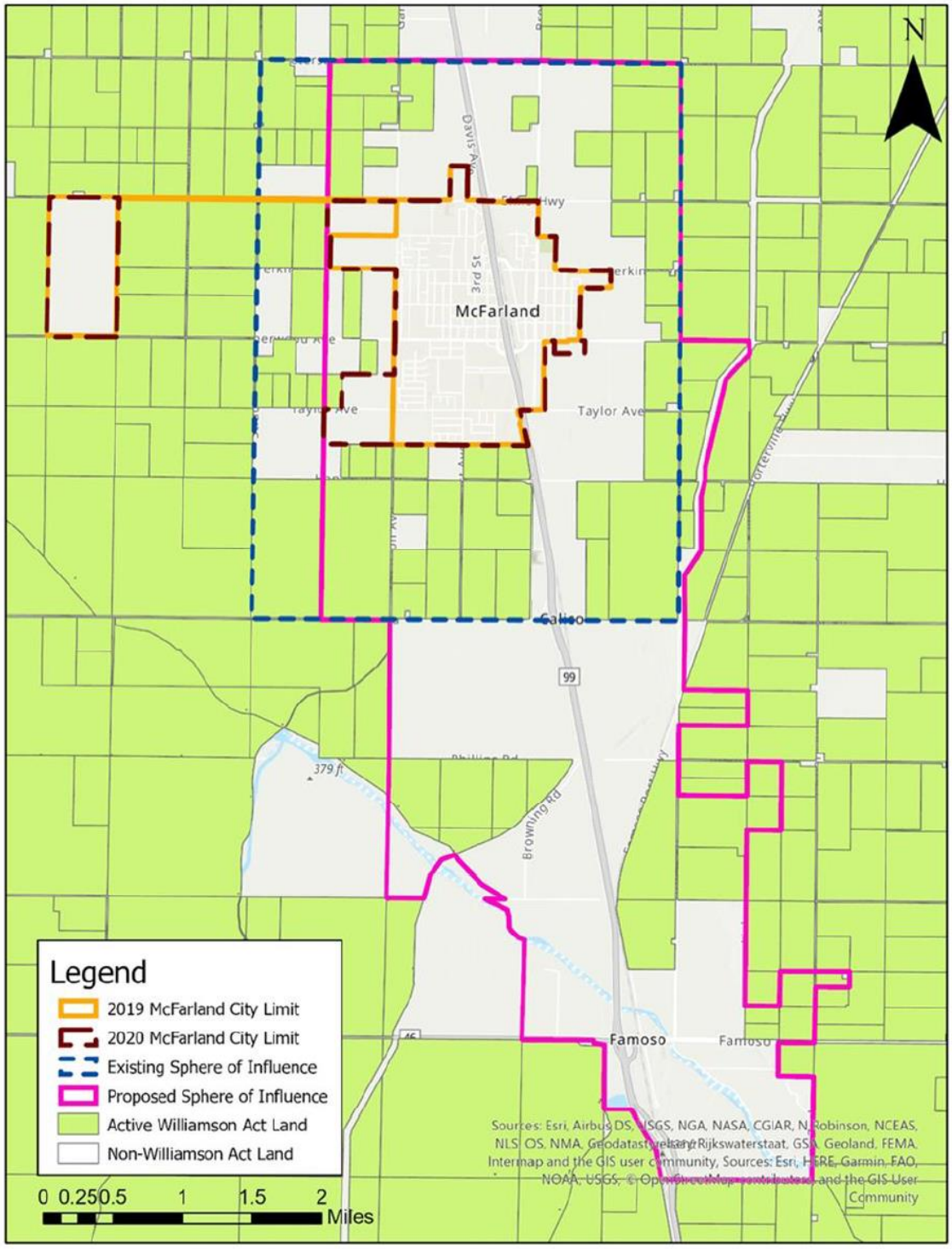
The California Historical Resources Information System (CHRIS) search on a recent General Plan EIR for the City of McFarland to identify all previous **cultural resources** work and previously recorded cultural resources within a 200-foot radius of the project site "*identified 14 previously conducted studies and **14 cultural resources** within the project site and 200-foot buffer. All of the cultural resources are built environment and were constructed during the 20th century. One resource, the Friant-Kern Canal is determined as eligible for the California Register of Historical Resources (CRHR) and National Register of Historic Places NRHP*." (City of McFarland. 2016. General Plan Amendment Environmental Impact Report)

Sincerely,

Maria Lara

Maria Lara
City Manager

Figure 1: McFarland with Existing and Proposed Boundaries and Sphere of Influence



9.1.5.2 NATIVE AMERICAN TRIBAL CONSULTATION LIST & RESPONSES

	Addresses of Native American Tribes	**Responses**
1	James Rambeau, Sr., Chairperson	
	Big Pine Paiute Tribe of the Owens Valley	
	P.O. Box 700	
	Big Pine, CA 93513	
	(760) 938-2003	
	j.rambeau@bigpinepaiute.org	
2	Sally Manning, Environmental Director	
	Big Pine Paiute Tribe of Owens Valley	
	P.O. Box 700	
	Big Pine, CA 93513	
	(760) 938-2003	
	s.manning@bigpinepaiute.org	
3	Danelle Gutierrez THPO	
	Big Pine Paiute Tribe of the Owens Valley	
	P.O. Box 700	
	Big Pine, CA 93513	
	(760) 938-2003, ext. 228	
	d.gutierrez@bigpinepaiute.org	
4	Julio Quair, Chairperson	
	Chumash Council of Bakersfield	
	729 Texas Street	
	Bakersfield, CA 93307	
	(661) 322-0121	no response to telephone call
	chumashtribe@sbcglobal.net	Returned email
5	Mariza Sullivan, Chairman	
	Coastal Band of the Chumash Nation	
	P. O. Box 4464	
	Santa Barbara, CA 93140	
	(805) 665-0486	
	cbcntribalchair@gmail.com	
6	Mona Olivas Tucker, Chairwoman	
	yak tityu tityu yak tiłhini - Northern Chumash Tribe	
	660 Camino Del Rey	
	Arroyo Grande, CA 93420	
	(805) 489-1052 Home	
	olivas.mona@gmail.com	

	Addresses of Native American Tribes	Responses
7	Julie Turner, Secretary	
	Kern Valley Indian Community	
	P.O. Box 1010	
	Lake Isabella, CA 93240	
	(661) 340-0032 Cell	answering machine
8	Robert Robinson, Chairperson	
	Kern Valley Indian Community	
	P.O. Box 1010	
	Lake Isabella, CA 93240	
	(760) 378-2915 Cell	
	bbutterbredt@gmail.com	
9	Brandy Kendricks	
	Kern Valley Indian Community	
	30741 Foxridge Court	
	Tehachapi, CA 93561	
	(661) 821-1733	
	krazykendricks@hotmail.com	
10	Jairo F. Avila, THPO	Outside Area - Defer to Tejon Tribe
	Fernandeno Tataviam Band of Mission Indians	
	1019 Second St., Suite 1	
	San Fernando, CA 91340	
	(818) 837-0794 Office	
	jairo.avila@tataviam-nsn.us	
11	Donna Yocum, Chairperson	
	San Fernando Band of Mission Indians	
	P.O. Box 221838	
	Newhall, CA 91322	
	(503) 593-0933	
	ddyocum@comcast.net	
12	Jessica Mauck, Director-CRM Dept.	Outside Area - no consultation needed
	San Manuel Band of Mission Indians	
	26569 Community Center Drive	
	Highland, CA 92346	
	(909) 864-8933	
	jmauck@sanmanuel-nsn.gov	
13	Delia Dominguez, Chairperson	
	Kitanemuk & Yowlumne Tejon Indians	
	115 Radio Street	

	Addresses of Native American Tribes	Responses
	Bakersfield, CA 93305	
	(626) 339-6785	
	2deedominguez@gmail.com	
14	Octavio Escobedo III, Chairperson	
	Tejon Indian Tribe	
	P.O. Box 640	
	Arvin 93203	
	(661) 834-8566	
	oescobedo@tejonindiantribe-nsn.gov	
15	Colin Rambo, CRM Tech	
	Tejon Indian Tribe	
	P.O. Box 640	
	Arvin, CA 93203	
	(661) 834-8566	
	colin.rambo@tejonindiantribe-nsn.gov	
16	Robert L. Gomez, Jr., Tribal Chairperson	
	Tubatulabals of Kern Valley	
	P.O. Box 226	
	Lake Isabella, CA 93240	
	(760) 379-4590	number no longer in service
17	Leo Sisco, Chairperson	
	Santa Rosa Rancheria Tachi Yokut Tribe	
	P.O. Box 8	
	Lemoore, CA 93245	
	(559) 924-1278	answering machine
18	Neil Peyron, Chairperson	
	Tule River Indian Tribe	
	P.O. Box 589	
	Porterville, CA 93258	
	(559) 781-4271	
	neil.peyron@tulerivertribe-nsn.gov	
19	Kenneth Woodrow, Chairperson	
	Wuksache Indian Tribe/Eshom Valley Band	
	1179 Rock Haven Ct.	
	Salinas, CA 93906	
	(831) 443-9702	
	kwood8934@aol.com	

9.1.5.3 SACRED LANDS FILE SEARCH WITH LIST OF TRIBES

STATE OF CALIFORNIA — Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

December 10, 2020

Maria Lara

City of McFarland

Via Email to: mlara@mcfarlandcity.org

Re: Native American Consultation, Pursuant to Senate Bill 18, Government Code §65352.3 and § 65352.4, Draft 2040 McFarland General Plan, Kern County

Dear Ms. Lara:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties.

Government Code §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

The law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

The NAHC also believes that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources that have already been recorded or are adjacent to the APE, such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code §6254.10.

3. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we are able to assure that our consultation list remains current.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst
Attachment

Native American Tribal Consultation List
December 10, 2020

Big Pine Paiute Tribe of the Owens Valley
James Rambeau, Sr., Chairperson
P.O. Box 700
Big Pine , CA 93513
j.rambeau@bigpinepaiute.org
(760) 938-2003
Paiute - Shoshone

Big Pine Paiute Tribe of Owens Valley
Sally Manning, Environmental Director
P.O. Box 700
Big Pine , CA 93513
s.manning@bigpinepaiute.org
(760) 938-2003
Paiute

Big Pine Paiute Tribe of the Owens Valley
Danelle Gutierrez THPO
P.O. Box 700
Big Pine , CA 93513
d.gutierrez@bigpinepaiute.org
(760) 938-2003, ext. 228
Paiute

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield , CA 93307
chumashtribe@sbcglobal.net
(661) 322-0121
Chumash

Coastal Band of the Chumash Nation
Mariza Sullivan, Chairman
P. O. Box 4464
Santa Barbara , CA 93140
cbcntribalchair@gmail.com
(805) 665-0486
Chumash

Fernandeno Tataviam Band of Mission Indians
Jairo F. Avila, THPO
1019 Second St., Suite 1
San Fernando , CA 91340
jairo.avila@tataviam-nsn.us
(818) 837-0794 Office
Fernandeno Tataviam

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella , CA 93240
(661) 340-0032 Cell
Kawaiisu Tubatulabal

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella , CA 93240
bbutterbredt@gmail.com
(760) 378-2915 Cell
Tubatulabal Kawaiisu

Kern Valley Indian Community
Brandy Kendricks
30741 Foxridge Court
Tehachapi , CA 93561
krazykendricks@hotmail.com
(661) 821-1733
Kawaiisu Tubatulabal

Kitanemuk & Yowlumne Teion Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield , CA 93305
2deedominguez@gmail.com
(626) 339-6785
Yowlumne Kitanemuk

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3 and 65362.4 et seq. for the proposed Draft 2040 McFarland General Plan, Kern County.

Native American Tribal Consultation List
December 10, 2020

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall , CA 91322
ddyocum@comcast.net
(503) 593-0933
Fernandeno Tataviam Serrano Vanyume Kitanemuk

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Tribal Chairperson
P.O. Box 226
Lake Isabella , CA 93240
(760) 379-4590
Tubatulabal

San Manuel Band of Mission Indians
Jessica Mauck, Director-CRM Dept.
26569 Community Center Drive
Highland , CA 92346
jmauck@sanmanuel-nsn.gov
(909) 864-8933
Serrano

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville , CA 93258
neil.peyron@tulerivertribe-nsn.gov
(559) 781-4271
Yokuts

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8
Lemoore , CA 93245
(559) 924-1278
Tache Tachi Yokut

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas , CA 93906
kwood8934@aol.com
(831) 443-9702
Foothill Yokuts Mono Wuksache

Teion Indian Tribe
Octavio Escobedo III, Chairperson
P.O. Box 640
Arvin , CA 93203
oescobedo@tejonindiantribe-nsn.gov
(661) 834-8566
Kitanemuk

vak titvu titvu vak tiłhini - Northern Chumash Tribe
Mona Olivas Tucker, Chairwoman
660 Camino Del Rey
Arroyo Grande , CA 93420
olivas.mona@gmail.com
(805) 489-1052 Home
Chumash

Teion Indian Tribe
Colin Rambo, CRM Tech
P.O. Box 640
Arvin , CA 93203
colin.rambo@tejonindiantribe-nsn.gov
(661) 834-8566
Kitanemuk

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3 and 65362.4 et seq. for the proposed Draft 2040 McFarland General Plan, Kern County.

9.2 Appendix to 4.7 Greenhouse Gas Emissions

Appendix to GHG Section: CalEEMod Output
San Joaquin Valley Air Basin, Annual
Business-As-Usual

Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	94.00	1000sqft	2.16	94,000.00	0
Government Office Building	2,008.00	1000sqft	46.10	2,008,000.00	0
Junior High School	2,204.00		0.00	0.00	0
Place of Worship	561.00		0.00	0.00	0
General Heavy Industry	21,306.00	1000sqft	489.12	21,306,000.00	0
General Light Industry	1,525.00	1000sqft	35.01	1,525,000.00	0
City Park	73.00	Acre	73.00	3,179,880.00	0
Apartments Low Rise	537.00	Dwelling Unit	33.56	537,000.00	1536
Apartments Mid Rise	1,954.00	Dwelling Unit	51.42	1,954,000.00	5588
Apartments Mid Rise	0.00	Dwelling Unit	0.00	0.00	0
Condo/Townhouse	21.00	Dwelling Unit	1.31	21,000.00	60
Single Family Housing	10,281.00	Dwelling Unit	3,337.99	18,505,800.00	29404
Automobile Care Center	14,298.00	1000sqft	328.24	14,298,000.00	0
Strip Mall	1,206.00	1000sqft	27.69	1,206,000.00	0
Strip Mall	1,954.00	1000sqft	44.86	1,954,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	7			**Operational Year**	2032
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.0905	0.4210	0.8214	2.0200e-003	5.1600e-003	0.0151	0.0203	1.3700e-003	0.0151	0.0165	0.0000	174.0092	174.0092	7.2500e-003	0.0000	174.1904
2032	0.3226	1.7857	2.1533	6.2000e-003	2.3764	0.0571	2.4335	1.3010	0.0571	1.3580	0.0000	533.4915	533.4915	0.0259	0.0000	534.1391
2033	0.1077	0.4505	0.7554	2.3100e-003	0.3414	0.0159	0.3573	0.1241	0.0159	0.1400	0.0000	215.7726	215.7726	8.6300e-003	0.0000	215.9884
2034	0.0679	0.2842	0.4762	1.4600e-003	0.2673	0.0100	0.2773	0.0839	0.0100	0.0939	0.0000	136.0708	136.0708	5.4400e-003	0.0000	136.2069
2035	94.1969	23.2377	17.2595	0.1453	12.4769	0.0629	12.5398	3.3609	0.0592	3.4201	0.0000	13,491.4854	13,491.4854	0.5092	0.0000	13,504.2141
2036	103.1647	91.0924	52.4908	0.4923	36.2122	0.2140	36.4262	9.8023	0.2028	10.0051	0.0000	45,899.7751	45,899.7751	1.9424	0.0000	45,948.3358
2037	102.7709	90.7447	52.2905	0.4905	36.0740	0.2132	36.2872	9.7649	0.2021	9.9670	0.0000	45,724.5851	45,724.5851	1.9350	0.0000	45,772.9605
2038	102.7709	90.7447	52.2905	0.4905	36.0740	0.2132	36.2872	9.7649	0.2021	9.9670	0.0000	45,724.5851	45,724.5851	1.9350	0.0000	45,772.9605
2039	102.3772	90.3970	52.0901	0.4886	35.9358	0.2124	36.1482	9.7275	0.2013	9.9288	0.0000	45,549.3951	45,549.3951	1.9276	0.0000	45,597.5851
2040	23.4067	76.8603	35.2875	0.3974	28.1683	0.1333	28.3016	7.6406	0.1258	7.7665	0.0000	37,145.7047	37,145.7047	1.6254	0.0000	37,186.3390
Maximum	103.1647	91.0924	52.4908	0.4923	36.2122	0.2140	36.4262	9.8023	0.2028	10.0051	0.0000	45,899.7751	45,899.7751	1.9424	0.0000	45,948.3358

3. Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.0905	0.4210	0.8214	2.0200e-003	5.1600e-003	0.0151	0.0203	1.3700e-003	0.0151	0.0165	0.0000	174.0090	174.0090	7.2500e-003	0.0000	174.1902
2032	0.3226	1.7857	2.1533	6.2000e-003	2.3764	0.0571	2.4335	1.3010	0.0571	1.3580	0.0000	533.4909	533.4909	0.0259	0.0000	534.1385
2033	0.1077	0.4505	0.7554	2.3100e-003	0.3414	0.0159	0.3573	0.1241	0.0159	0.1400	0.0000	215.7724	215.7724	8.6300e-003	0.0000	215.9882
2034	0.0679	0.2842	0.4762	1.4600e-003	0.2673	0.0100	0.2773	0.0839	0.0100	0.0939	0.0000	136.0707	136.0707	5.4400e-003	0.0000	136.2068
2035	94.1969	23.2377	17.2595	0.1453	12.4769	0.0629	12.5398	3.3609	0.0592	3.4201	0.0000	13,491.4852	13,491.4852	0.5092	0.0000	13,504.2139
2036	103.1647	91.0924	52.4908	0.4923	36.2122	0.2140	36.4262	9.8023	0.2028	10.0051	0.0000	45,899.7743	45,899.7743	1.9424	0.0000	45,948.3350
2037	102.7709	90.7447	52.2904	0.4905	36.0740	0.2132	36.2872	9.7649	0.2021	9.9670	0.0000	45,724.5843	45,724.5843	1.9350	0.0000	45,772.9596
2038	102.7709	90.7447	52.2904	0.4905	36.0740	0.2132	36.2872	9.7649	0.2021	9.9670	0.0000	45,724.5843	45,724.5843	1.9350	0.0000	45,772.9596
2039	102.3772	90.3970	52.0901	0.4886	35.9358	0.2124	36.1482	9.7275	0.2013	9.9288	0.0000	45,549.3943	45,549.3943	1.9276	0.0000	45,597.5843
2040	23.4067	76.8603	35.2875	0.3974	28.1683	0.1333	28.3016	7.6406	0.1258	7.7665	0.0000	37,145.7043	37,145.7043	1.6254	0.0000	37,186.3386
Maximum	103.1647	91.0924	52.4908	0.4923	36.2122	0.2140	36.4262	9.8023	0.2028	10.0051	0.0000	45,899.7743	45,899.7743	1.9424	0.0000	45,948.3350

2.2 Overall Operational

4.

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	300.3894	6.6122	97.4994	0.0403		0.9742	0.9742		0.9742	0.9742	0.0000	6,544.4813	6,544.4813	0.2724	0.1171	6,586.1929
Energy	5.2962	47.2527	33.8807	0.2889		3.6592	3.6592		3.6592	3.6592	0.0000	129,114.1394	129,114.1394	4.1711	1.6161	129,700.0081
Mobile	110.7976	1,473.2640	915.8290	6.3880	429.4153	2.8189	432.2341	115.3015	2.6361	117.9375	0.0000	596,720.5250	596,720.5250	46.7809	0.0000	597,890.0464
Waste						0.0000	0.0000		0.0000	0.0000	20,385.7146	0.0000	20,385.7146	1,204.7612	0.0000	50,504.7450
Water						0.0000	0.0000		0.0000	0.0000	2,572.3072	16,025.2208	18,597.5280	264.8622	6.3752	27,118.9023
Total	**416.4833**	**1,527.1289**	**1,047.2090**	**6.7171**	**429.4153**	**7.4523**	**436.8676**	**115.3015**	**7.2695**	**122.5710**	**22,958.0218**	**748,404.3664**	**771,362.3882**	**1,520.8478**	**8.1084**	**811,799.8946**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	300.3894	6.6122	97.4994	0.0403		0.9742	0.9742		0.9742	0.9742	0.0000	6,544.4813	6,544.4813	0.2724	0.1171	6,586.1929
Energy	5.2962	47.2527	33.8807	0.2889		3.6592	3.6592		3.6592	3.6592	0.0000	129,114.1394	129,114.1394	4.1711	1.6161	129,700.0081
Mobile	110.7976	1,473.2640	915.8290	6.3880	429.4153	2.8189	432.2341	115.3015	2.6361	117.9375	0.0000	596,720.5250	596,720.5250	46.7809	0.0000	597,890.0464
Waste						0.0000	0.0000		0.0000	0.0000	20,385.7146	0.0000	20,385.7146	1,204.7612	0.0000	50,504.7450
Water						0.0000	0.0000		0.0000	0.0000	2,572.3072	16,025.2208	18,597.5280	264.8622	6.3752	27,118.9023
Total	**416.4833**	**1,527.1289**	**1,047.2090**	**6.7171**	**429.4153**	**7.4523**	**436.8676**	**115.3015**	**7.2695**	**122.5710**	**22,958.0218**	**748,404.3664**	**771,362.3882**	**1,520.8478**	**8.1084**	**811,799.8946**

General Plan EIR: Business-As-Usual VMT

Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	**Weekday**	**Saturday**	**Sunday**	**Annual VMT**	**Annual VMT**
Apartments Low Rise	3,539	3,845	3,260	10,265,996	10,265,996
Apartments Mid Rise	12,994	12,486	11,450	36,805,170	36,805,170
Apartments Mid Rise	0	0	0		
Automobile Care Center	339,149	339,149	169,860	313,763,271	313,763,271
City Park	138	1,661	1,222	1,089,574	1,089,574
Condo/Townhouse	122	119	102	343,913	343,913
General Heavy Industry	31,959	31,959	31,959	93,304,657	93,304,657
General Light Industry	10,629	2,013	1,037	23,437,940	23,437,940
General Office Building	1,037	231	99	1,882,456	1,882,456
Government Office Building	138,411	0	0	169,542,194	169,542,194
Single Family Housing	97,875	101,885	88,622	281,453,568	281,453,568
Strip Mall	53,450	50,700	24,639	75,371,069	75,371,069
Strip Mall	86,601	82,146	39,920	122,118,632	122,118,632
Total	**775,904**	**626,194**	**372,170**	**1,129,378,439**	**1,129,378,439**

San Joaquin Valley Air Basin, Annual

General Plan Proposals

1.1 Project Characteristics

Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	112.00	1000sqft	2.57	112,000.00	0
Government Office Building	2,244.00	1000sqft	51.52	2,244,000.00	0
Junior High School	1,816.00		0.00	0.00	0
Place of Worship	713.00		0.00	0.00	0
General Heavy Industry	23,983.00	1000sqft	550.57	23,983,000.00	0
General Light Industry	10,348.00	1000sqft	237.56	10,348,000.00	0
City Park	66.00	Acre	66.00	2,874,960.00	0
Apartments Low Rise	2,206.00	Dwelling Unit	137.88	2,206,000.00	6309
Apartments Mid Rise	1,943.00	Dwelling Unit	51.13	1,943,000.00	5557
Apartments Mid Rise	173.00	Dwelling Unit	4.55	173,000.00	495
Condo/Townhouse	1,920.00	Dwelling Unit	120.00	1,920,000.00	5491
Single Family Housing	6,539.00	Dwelling Unit	2,123.05	11,770,200.00	18702
Automobile Care Center	2,042.00	1000sqft	46.88	2,042,000.00	0
Strip Mall	1,968.00	1000sqft	45.18	1,968,000.00	0
Strip Mall	1,943.00	1000sqft	44.61	1,943,000.00	0

1.2 Other Project Characteristics

Urbanization Climate Zone: Urban 7

Wind Speed (m/s): 2.7

Precipitation Freq (Days) Operational Year: 45 | 2032

Utility Company: Southern California Edison

CO2 Intensity (lb/MWhr): 702.44

CH4 Intensity (lb/MWhr): 0.029

N2O Intensity (lb/MWhr): 0.006

Emissions Summary

Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.2745	1.2778	2.4928	6.1400e-003	0.0157	0.0459	0.0615	4.1600e-003	0.0459	0.0500	0.0000	528.0975	528.0975	0.0220	0.0000	528.6476
2032	0.3077	1.6232	2.2742	6.2000e-003	1.5986	0.0536	1.6522	0.8737	0.0536	0.9272	0.0000	533.6703	533.6703	0.0247	0.0000	534.2878
2033	0.3949	1.7945	2.7345	8.2300e-003	1.8014	0.0613	1.8627	0.7696	0.0613	0.8309	0.0000	754.6001	754.6001	0.0317	0.0000	755.3919
2034	0.3179	1.3307	2.2301	6.8100e-003	1.0800	0.0469	1.1269	0.3744	0.0469	0.4213	0.0000	637.2098	637.2098	0.0255	0.0000	637.8470
2035	1.7423	22.7672	12.2234	0.1198	8.5641	0.0487	8.6128	2.3209	0.0461	2.3670	0.0000	11,184.5708	11,184.5708	0.4836	0.0000	11,196.6604
2036	116.4546	91.2378	56.0137	0.5104	39.0883	0.2234	39.3117	10.5665	0.2114	10.7780	0.0000	47,535.0314	47,535.0314	1.9578	0.0000	47,583.9765
2037	119.8893	90.9090	56.0294	0.5096	39.1193	0.2232	39.3425	10.5741	0.2112	10.7853	0.0000	47,459.1392	47,459.1392	1.9515	0.0000	47,507.9260
2038	119.8893	90.9090	56.0294	0.5096	39.1193	0.2232	39.3425	10.5741	0.2112	10.7853	0.0000	47,459.1392	47,459.1392	1.9515	0.0000	47,507.9260
2039	119.4299	90.5607	55.8148	0.5077	38.9694	0.2223	39.1917	10.5336	0.2104	10.7440	0.0000	47,277.3035	47,277.3035	1.9440	0.0000	47,325.9033
2040	26.5230	76.9340	37.6471	0.4111	30.4535	0.1390	30.5925	8.2478	0.1311	8.3789	0.0000	38,385.2781	38,385.2781	1.6343	0.0000	38,426.1344
Maximum	**119.8893**	**91.2378**	**56.0294**	**0.5104**	**39.1193**	**0.2234**	**39.3425**	**10.5741**	**0.2114**	**10.7853**	**0.0000**	**47,535.0314**	**47,535.0314**	**1.9578**	**0.0000**	**47,583.9765**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.2745	1.2778	2.4928	6.1400e-003	0.0157	0.0459	0.0615	4.1600e-003	0.0459	0.0500	0.0000	528.0969	528.0969	0.0220	0.0000	528.6470
2032	0.3077	1.6232	2.2742	6.2000e-003	1.5986	0.0536	1.6522	0.8737	0.0536	0.9272	0.0000	533.6697	533.6697	0.0247	0.0000	534.2872
2033	0.3948	1.7945	2.7345	8.2300e-003	1.8014	0.0613	1.8627	0.7696	0.0613	0.8309	0.0000	754.5992	754.5992	0.0317	0.0000	755.3910
2034	0.3179	1.3307	2.2301	6.8100e-003	1.0800	0.0469	1.1269	0.3744	0.0469	0.4213	0.0000	637.2091	637.2091	0.0255	0.0000	637.8463
2035	1.7423	22.7672	12.2234	0.1198	8.5641	0.0487	8.6128	2.3209	0.0461	2.3670	0.0000	11,184.5707	11,184.5707	0.4836	0.0000	11,196.6603
2036	116.4546	91.2378	56.0137	0.5104	39.0883	0.2234	39.3117	10.5665	0.2114	10.7780	0.0000	47,535.0306	47,535.0306	1.9578	0.0000	47,583.9757
2037	119.8893	90.9090	56.0294	0.5096	39.1193	0.2232	39.3425	10.5741	0.2112	10.7853	0.0000	47,459.1384	47,459.1384	1.9515	0.0000	47,507.9252
2038	119.8893	90.9090	56.0294	0.5096	39.1193	0.2232	39.3425	10.5741	0.2112	10.7853	0.0000	47,459.1384	47,459.1384	1.9515	0.0000	47,507.9252
2039	119.4299	90.5607	55.8147	0.5077	38.9694	0.2223	39.1917	10.5336	0.2104	10.7440	0.0000	47,277.3026	47,277.3026	1.9440	0.0000	47,325.9025
2040	26.5230	76.9340	37.6471	0.4111	30.4535	0.1390	30.5925	8.2478	0.1311	8.3789	0.0000	38,385.2777	38,385.2777	1.6343	0.0000	38,426.1341
Maximum	**119.8893**	**91.2378**	**56.0294**	**0.5104**	**39.1193**	**0.2234**	**39.3425**	**10.5741**	**0.2114**	**10.7853**	**0.0000**	**47,535.0306**	**47,535.0306**	**1.9578**	**0.0000**	**47,583.9757**

Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	286.9767	6.6673	97.4344	0.0406		0.9783	0.9783		0.9783	0.9783	0.0000	6,609.3170	6,609.3170	0.2735	0.1183	6,651.4113
Energy	5.0432	45.0787	32.8733	0.2751		3.4844	3.4844		3.4844	3.4844	0.0000	125,025.4388	125,025.4388	4.0577	1.5566	125,590.7584
Mobile	87.0490	1,126.0503	786.0188	5.5540	394.8555	2.4970	397.3524	106.0219	2.3360	108.3579	0.0000	518,421.5598	518,421.5598	35.4232	0.0000	519,307.1402
Waste						0.0000	0.0000		0.0000	0.0000	13,515.5727	0.0000	13,515.5727	798.7475	0.0000	33,484.2593
Water						0.0000	0.0000		0.0000	0.0000	3,083.4814	18,077.4010	21,160.8824	317.4494	7.6325	31,371.5905
Total	**379.0689**	**1,177.7963**	**916.3265**	**5.8697**	**394.8555**	**6.9597**	**401.8151**	**106.0219**	**6.7987**	**112.8206**	**16,599.0541**	**668,133.7166**	**684,732.7707**	**1,155.9513**	**9.3074**	**716,405.1597**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	286.9767	6.6673	97.4344	0.0406		0.9783	0.9783		0.9783	0.9783	0.0000	6,609.3170	6,609.3170	0.2735	0.1183	6,651.4113
Energy	4.1081	36.6951	26.5968	0.2241		2.8383	2.8383		2.8383	2.8383	0.0000	108,788.7397	108,788.7397	3.5921	1.3273	109,274.0843
Mobile	67.9926	965.6383	431.8067	2.8720	150.9532	1.1771	152.1303	40.5322	1.0988	41.6310	0.0000	269,050.5559	269,050.5559	31.3132	0.0000	269,833.3861
Waste						0.0000	0.0000		0.0000	0.0000	13,515.5727	0.0000	13,515.5727	798.7475	0.0000	33,484.2593
Water						0.0000	0.0000		0.0000	0.0000	2,466.7851	14,593.9970	17,060.7821	253.9650	6.1071	25,229.8211
Total	**359.0773**	**1,009.0007**	**555.8379**	**3.1367**	**150.9532**	**4.9937**	**155.9469**	**40.5322**	**4.9154**	**45.4476**	**15,982.3578**	**399,042.6095**	**415,024.9673**	**1,087.8912**	**7.5527**	**444,472.9621**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.27**	**14.33**	**39.34**	**46.56**	**61.77**	**28.25**	**61.19**	**61.77**	**27.70**	**59.72**	**3.72**	**40.28**	**39.39**	**5.89**	**18.85**	**37.96**

General Plan EIR: General Plan Proposals VMT

Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	**Weekday**	**Saturday**	**Sunday**	**Annual VMT**	**Annual VMT**
Apartments Low Rise	14,538	15,795	13,390	42,172,788	17,310,927
Apartments Mid Rise	12,921	12,416	11,386	36,597,977	15,022,599
Apartments Mid Rise	1,150	1,105	1,014	3,258,595	1,337,576
Automobile Care Center	48,436	48,436	24,259	44,810,785	16,912,905
City Park	125	1,502	1,105	985,094	371,785
Condo/Townhouse	11,155	10,886	9,293	31,443,464	12,906,795
General Heavy Industry	35,975	35,975	35,975	105,027,954	38,858,469
General Light Industry	72,126	13,659	7,037	159,039,869	58,841,915
General Office Building	1,235	276	118	2,242,926	846,502
Government Office Building	154,679	0	0	189,468,467	68,637,517
Single Family Housing	62,251	64,801	56,366	179,012,244	73,480,271
Strip Mall	87,222	82,735	40,206	122,993,586	46,538,293
Strip Mall	86,114	81,684	39,695	121,431,167	45,947,105
Total	**587,926**	**369,270**	**239,843**	**1,038,484,916**	**397,012,659**

9.3 Appendix to 4.16 Transportation and Traffic

A4.16.1 INTRODUCTION

The Plan proposes the concentration of development in five growth areas over a target plan period that extends to 2040. Map A4.16-1 shows the growth areas. This section documents the methodology and data used to assess the transportation impact of the configuration of new developments and improvements to circulation envisioned to occur under the Plan (termed, project) in terms of vehicle miles traveled (VMT).

Senate Bill (SB) 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing this criterion, OPR was guided by the general principles contained within CEQA, the CEQA Guidelines, and applicable case law. The VMT metric can support the three statutory goals: "the reduction of greenhouse gas emissions; the development of multimodal transportation networks; and a diversity of land uses." (Pub. Resources Code, § 21099, subd. (b)(1).) OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so.

A4.16.2 EXISTING & BASELINE OPERATING CONDITIONS

An assessment of existing travel conditions reflecting prevailing levels of per capita VMT established baseline travel conditions for the study area. The objective is for projects to reduce per capita VMT in support of the three statutory goals of the State of California to reduce greenhouse gas emissions, develop multimodal networks, and diversify land uses. Table A4.16-1 provides thresholds of significance for reductions in VMT.

In response to Senate Bill 743 requiring lead agencies to assess Vehicle VMT impacts of projects, the California Department of Transportation (Caltrans) provides data from the California Statewide Travel Demand Model (CSTDM) for use to assess VMT resulting from residential and office land use projects, and to set thresholds of significance. The City of McFarland and its sphere of influence falls within Travel Analysis Zone (TAZ) 2949. According to the CSTDM, McFarland had a per capita home-based VMT of 17.7 miles in 2010, which was projected under baseline conditions to reduce to 16.8 for a 5 percent reduction. Similarly, McFarland had an employee based VMT of 21.8 miles per employee in 2010, which was projected under baseline conditions to reduce to 18.5 for a 15 percent reduction. These levels of baseline reduction in VMT are below the greenhouse gas reduction thresholds implicit in Table A4.16-1.

Map A4.16-1 General Plan Key Growth Areas in McFarland

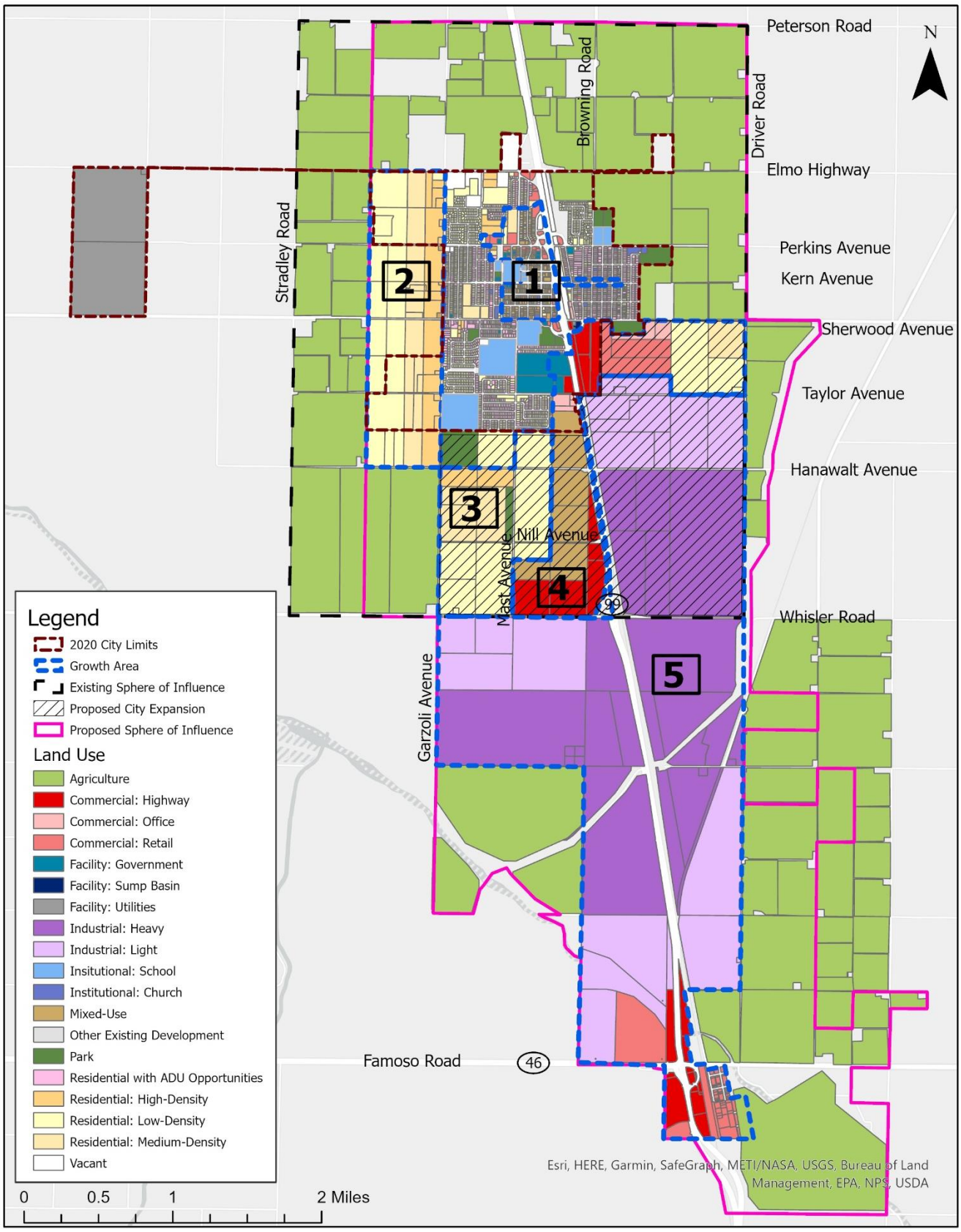


Table A4.16-1 Vehicle Miles Traveled (VMT) Thresholds of Significance

Legislative Mandates/ State Policies	Description of Thresholds
Assembly Bill 32 (2006)	Requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020
Senate Bill 32 (2016)	Requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.
Senate Bill 375 (2008)	The California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS). Current targets for the State's largest MPOs call for a 19 percent reduction in GHG emissions from cars and light trucks from 2005 emissions levels by 2035.
Executive Order B-30-15 (2015)	Requires a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
Executive Order S-3-05 (2005)	Sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.
Executive Order B-16-12 (2012)	Specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.
Executive Order B-55-18 (2018)	Requires an additional statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and maintaining net negative emissions thereafter. It states, "The California Air Resources Board shall work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal."
Senate Bill 391	Requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050.
California Air Resources Board Mobile Source Strategy (2016)	Describes California's strategy for containing air pollutant emissions from vehicles and quantifies VMT growth compatible with achieving state targets.
The California Air Resources Board's *2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target*	Describes California's strategy for containing GHG emissions from vehicles and quantifies VMT growth compatible with achieving state targets.

Source: Office of Planning and Research (OPR), 2018

A4.16.3 THE FOUR-STEP PROCESS

A4.16.3.1 TRIP GENERATION

Trip generation for build-out of the vision for the 2040 General Plan project is estimated using trip rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 2017, the San Diego Trip Generation Manual, 2003, and location-specific rates from Kern County Council of Government (COG) San Joaquin Valley Model Development Report, 2017. The build-out of the Plan includes expansion up to the proposed Sphere of Influence (SOI) boundaries as shown in Map A4.16-1. Table A4.16-2 shows the trip rates used for various land uses included in the Plan. It is noted that the trip rates are selected to approximate the traffic volumes generated in McFarland's small suburban environment.

Table A4.16-2 Trip Generation Rates by Land Uses

General Plan Land Use	Daily Trip Rate	Unit	Source
Agriculture	2.00	Acres	San Diego, 2003
Commercial: Highway	37.75	ksf	ITE, 2017
Commercial: Office	9.74	ksf	ITE, 2017
Commercial: Retail	53.12	ksf	ITE, 2017
Facility: Government	5.19	ksf	KernCOG, 2017
Facility: Utilities	2.00	Acres	San Diego, 2003
Industrial: Heavy	0.62	ksf	ITE, 2017
Industrial: Light	0.70	ksf	ITE, 2017
Institutional: Church	6.95	ksf	ITE, 2017
Institutional: School	2.76	ksf	KernCOG, 2017
Mixed-Use	3.44	Dwelling units	ITE, 2017
Park	0.78	Dwelling units	ITE, 2017
Residential with ADU Opportunities	9.44	Acres	ITE, 2017
Residential: High-Density	5.44	Dwelling units	ITE, 2017
Residential: Low-Density	9.44	Dwelling units	ITE, 2017
Residential: Medium-Density	7.32	Dwelling units	ITE, 2017

A4.16.3.1.1 DESCRIPTION OF FUTURE GROWTH ALTERNATIVES

Business-As-Usual

Business-As-Usual (BAU) is based on historic growth patterns and land use trends. This alternative envisions primarily commercial and industrial development along Highway 99. Residential, institutional, and other development continues to the west and to the east of the Highway 99 corridor. Transportation systems remain automobile-oriented with some improvements for pedestrian connectivity and comfort. Extensive development, including residential development, occurs in 100-year and 500-year floodplains, presenting risks to life and property. Utilities must expand and improve to provide adequate capacity, especially wastewater and stormwater on the east side of the City.

Redevelopment

Redevelopment advocates focusing growth on underutilized and vacant parcels to concentrate growth within walkable, bikeable, or bus-ride distances to retail and services. This alternative identifies 5 areas of proposed growth that may be outlined as follows:

- **Downtown Core**: Mixed-use commercial and residential development close to shops, amenities, and public spaces.
- **North and West Neighborhoods**: Commercial infill, high density housing, and improved connectivity to activity hubs in the City.
- **Southern Highway Commercial**: New commercial area south of the City along Highway 99 to create opportunities for such businesses as grocery stores and retail centers that require large space

- **East Neighborhood**: Mixed-use office buildings along the highway corridor, ADUs throughout the neighborhood, and improved connectivity to the west side of the City.

The Moderate Growth and Redevelopment Alternative prioritizes mixed-use designations and infill development to create growth within the City while reducing sprawl and improving residential transport connectivity. This alternative also offers diverse transportation options that address walkability and bike-ability between regions of the City and the expansion of existing bus transit service.

Smart Growth

The Smart Growth Alternative accounts for the most aggressive population growth for the City of McFarland, maximizing infill within the City and new development outside of the existing City boundary to accommodate the maximum projected population, housing, and job growth. This alternative identifies three key areas for growth of housing and jobs across the City:

- **Downtown Infill**: The entire downtown core is to be designated for mixed-use development which would allow buildings to host commercial or office on the first floor and residential units on the upper floors. This increase in density has the potential to offer density bonus opportunities for affordable housing developers.
- **Westside Expansion**: A range of low-to-high density residential developments to accommodate projected population growth. High-density residential development is proposed along the westside's main arterial roadway, Garzoli Avenue, while medium and low-density housing is proposed on slower moving residential streets.
- **Highway 99 Improvements**: This area promotes highway-serving commercial uses such as gas stations and hotels, as well as industrial uses such as manufacturing along Highway 99.

The Smart Growth Alternative focuses its aggressive growth in three key areas to serve the needs of neighborhoods, the region, and travelers on Highway 99. To avoid locating new residential development in hazard areas, the Smart Growth Alternative increases the density of housing typologies, particularly in the Downtown Infill and Westside expansion key growth areas. Additionally, new mixed-use and commercial development are prioritized in the Downtown Infill to support a vibrant downtown core and at key intersections within the Westside Expansion key growth area (Garzoli Avenue at Perkins, Sherwood, and Taylor Avenues). Commercial development is also prioritized along Highway 99 to encourage highway travelers to stop for services in McFarland.

Composite Growth

Composite Growth (also referred to as Preferred Growth) includes a combination of the community's preferred features derived from the previous three alternatives. This alternative purports to influence future land use designations, housing allocation, and circulation improvements needed to meet the population growth projections and targets for job growth. The main features of this alternative include medium and high density mixed-use downtown and along major arterials west of downtown as well as the establishment of neighborhood retail centers. This provides the opportunity to integrate housing and commercial uses, making services readily accessible to large segments of the population. In addition to mixed use commercial, this alternative includes commercial uses along Highway 99 to cater for pass-through traffic and industrial uses to the south to boost the availability of jobs. The Alternative therefore includes the following variety of changes to land use:

- Infill development for housing and commercial growth on the west side of the City.
- A neighborhood commercial corridor along Kern Avenue to serve the east side of the City.
- Downtown mixed-use redevelopment to create a vibrant atmosphere in the center of the City.
- Commercial and industrial development along Highway 99.
- Additional Accessory Dwelling Units in the Central McFarland neighborhoods.

General Plan

The General Plan is a refined version of the Composite (or Preferred) Growth Alternative with special emphasis on diversity and mixture of compatible land uses together with a multimodal transportation network to promote reduction in vehicle miles traveled and consequent reduction in greenhouse gas emissions. The Plan concentrates development in five key growth areas to target McFarland's most optimal locations for development in Downtown, Western McFarland, and the Highway 99 Corridor. Major growth areas include: Revitalized Downtown, West Expansion Area, Whisler Road Neighborhood, Southern Commercial Corridor, and Famoso Industrial and Commercial Center. Growth areas are designed to accommodate maximum growth while aligning with McFarland's desires to remain an agriculture-based City. Even with the many changes, McFarland's small-town community character is envisioned to remain.

Circulation for the General Plan includes a network of complete streets, a pedestrian and bike network, new transit stops for internal transit service and at major commercial centers along Highway 99, and safety improvements to pedestrian crossings between the east and west sides of the City. These new circulation connections are to expand multi-modal transportation throughout the City.

A4.16.3.1.2 TRIP GENERATION BY GROWTH ALTERNATIVES

The allocation of space for various land uses across the City and SOI and associated circulation network together with the degree of mixing of compatible uses defined the alternative development scenarios. Table A4.16-3a is a summary of the main land use categories and the allocation of space to the uses under various development scenarios.

Table A4.16-3a Allocation of Land Uses in Growth Alternatives

Land Use	Unit	Business-As-Usual	Redevelopment	Smart Growth	Preferred Growth	General Plan	Existing Land Use
Agriculture	ACRE	2,037	1,563	1,809	1,627	1,584	356
Commercial: Highway	KSF	14,298	2,736	1,793	2,182	2,042	-
Commercial: Office	KSF	94	91	88	88	112	55
Commercial: Retail	KSF	1,206	2,097	1,730	1,994	1,968	246
Facility: Government	KSF	2,008	3,197	3,142	2,131	2,244	163
Facility: Utilities	ACRE	321	321	303	303	320	166
Industrial: Heavy	KSF	21,306	18,111	18,525	22,878	23,983	-
Industrial: Light	KSF	1,525	17,359	17,288	10,039	10,348	314
Institutional: Church	KSF	561	903	879	692	713	231
Institutional: School	KSF	2,204	2,329	1,371	1,592	1,816	520
Mixed-Use	KSF	3,909	286	2,295	5,513	3,885	62
Park	ACRE	91	85	66	63	66	40
Residential with ADU	DU	-	583	-	-	173	-
Residential: High-Density	DU	537	465	1,061	1,725	2,206	359
Residential: Low-Density	DU	10,281	9,616	4,653	7,414	6,539	2,921
Residential: Medium-Density	DU	21	175	5,126	1,701	1,920	9
Total KSF	KSF	47,110	47,110	47,110	47,110	47,110	1,590
Total DU	DU	10,839	10,839	10,839	10,839	10,839	3,289
Total Acres	ACRE	2,449	1,970	2,178	1,993	1,970	562
Grand Total Plan Acres	**ACRE**	**14,859**	**13,258**	**12,826**	**13,107**	**12,777**	**1,499**

Table A4.16-3b shows corresponding numbers of trips for the entire City by each growth alternative. At build-out of the City, the BAU alternative is estimated to generate the most daily trips of 366,191 due to the prevalence of automobile-orientation in its development concept. The Redevelopment and Smart Growth alternatives would have fewer daily trips as they promote ADUs and infill development to maximize growth within City limits. The Composite Growth alternative has slightly higher daily trips than the Smart Growth alternative because it combines preferred growth concepts from each alternative including low-density residential growth under BAU, ADUs from redevelopment, as well as infill development and downtown core development from Smart Growth. However, as the Composite Growth is refined into the General Plan with improved transportation network and balanced land uses, the General Plan is projected to have the lowest daily trips of 174,380 by 2040.

Table A4.16-3b 2040 Trip Generation by Land Uses in Growth Alternatives

Growth Alternative	Daily Trips
Business-As-Usual	366,191
Redevelopment	212,734
Smart Growth	175,069
Composite Growth	178,164
General Plan	174,380

A4.16.3.2 TRIP DISTRIBUTION

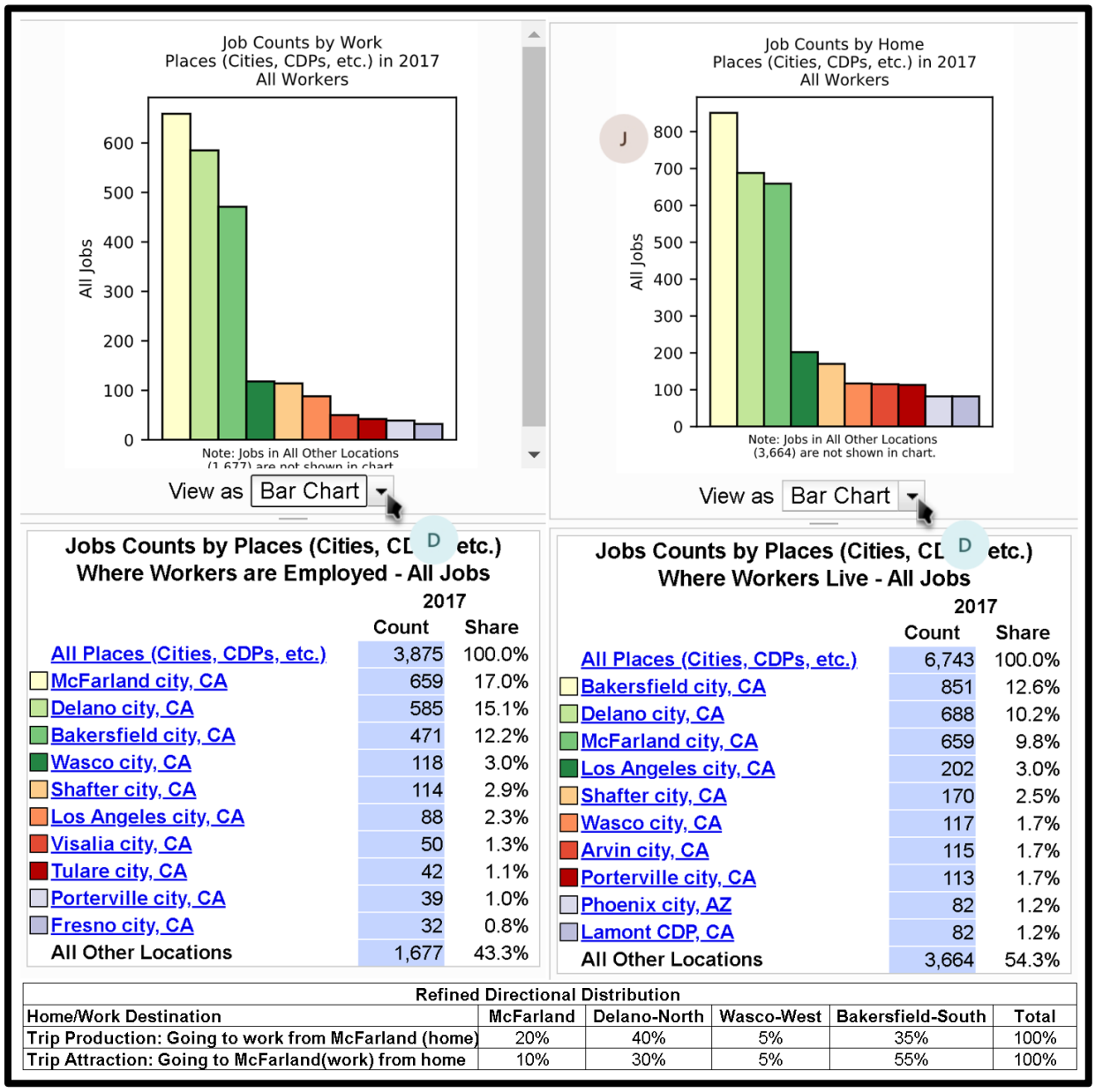
In this step, the estimated trip productions and attractions among the Traffic Analysis Zones (TAZ) were distributed based on general patterns in the directional flow of travel within McFarland and between the City and external cities. The Longitudinal Employer Household Dynamics (LEHD) “On the Map” web tool of the US Census generates these directional distributions primarily from commute travel data. The tool identifies the proportions of travel flows in various directions. The proportions were applied to trip generation forecasts to determine the directionality of all trips going in and out of the study area. Figure A4.16-1 shows a visual representation of in and out flows and a tabulation of resultant directional distribution of trips.

Application of the gravity model aided the distribution of internal and external trip forecasts among the TAZs. Map A4.16-2 shows the TAZs within and surrounding the City in the addition to three external stations that serve as the capture points of all trips that are external to the McFarland study area.

In the Gravity Model, trips between a pair of origins and destinations is a function of the number of trips produced at the origin, the attractiveness of the destination, and friction between them, which is represented as an inverse function of distance. Trip distances derived from geographic information systems (GIS) were distances “as the crow flies” or desire lines. A random sample of overland distances from Google maps helped in the derivation of a regression equation to convert desire line distances to overland distance. Table A4.16-4 shows the trip distances between zones with the regression equation used to convert them into overland distances.

Figure A4.16-2 shows the equation for the gravity model used. Table A4.16-5a through Table A4.16-5e show the resultant trip distributions among TAZs for various growth alternatives.

Figure A4.16-1 Directional Distribution of Trips



Jobs Counts by Places (Cities, CDPs, etc.) Where Workers are Employed - All Jobs

	2017 Count	Share
All Places (Cities, CDPs, etc.)	3,875	100.0%
McFarland city, CA	659	17.0%
Delano city, CA	585	15.1%
Bakersfield city, CA	471	12.2%
Wasco city, CA	118	3.0%
Shafter city, CA	114	2.9%
Los Angeles city, CA	88	2.3%
Visalia city, CA	50	1.3%
Tulare city, CA	42	1.1%
Porterville city, CA	39	1.0%
Fresno city, CA	32	0.8%
All Other Locations	1,677	43.3%

Jobs Counts by Places (Cities, CDPs, etc.) Where Workers Live - All Jobs

	2017 Count	Share
All Places (Cities, CDPs, etc.)	6,743	100.0%
Bakersfield city, CA	851	12.6%
Delano city, CA	688	10.2%
McFarland city, CA	659	9.8%
Los Angeles city, CA	202	3.0%
Shafter city, CA	170	2.5%
Wasco city, CA	117	1.7%
Arvin city, CA	115	1.7%
Porterville city, CA	113	1.7%
Phoenix city, AZ	82	1.2%
Lamont CDP, CA	82	1.2%
All Other Locations	3,664	54.3%

Refined Directional Distribution

Home/Work Destination	McFarland	Delano-North	Wasco-West	Bakersfield-South	Total
Trip Production: Going to work from McFarland (home)	20%	40%	5%	35%	100%
Trip Attraction: Going to McFarland(work) from home	10%	30%	5%	55%	100%

Source: LEHD, 2017

Map A4.16-2 Traffic Analysis Zones (TAZ) in McFarland and Sphere of Influence

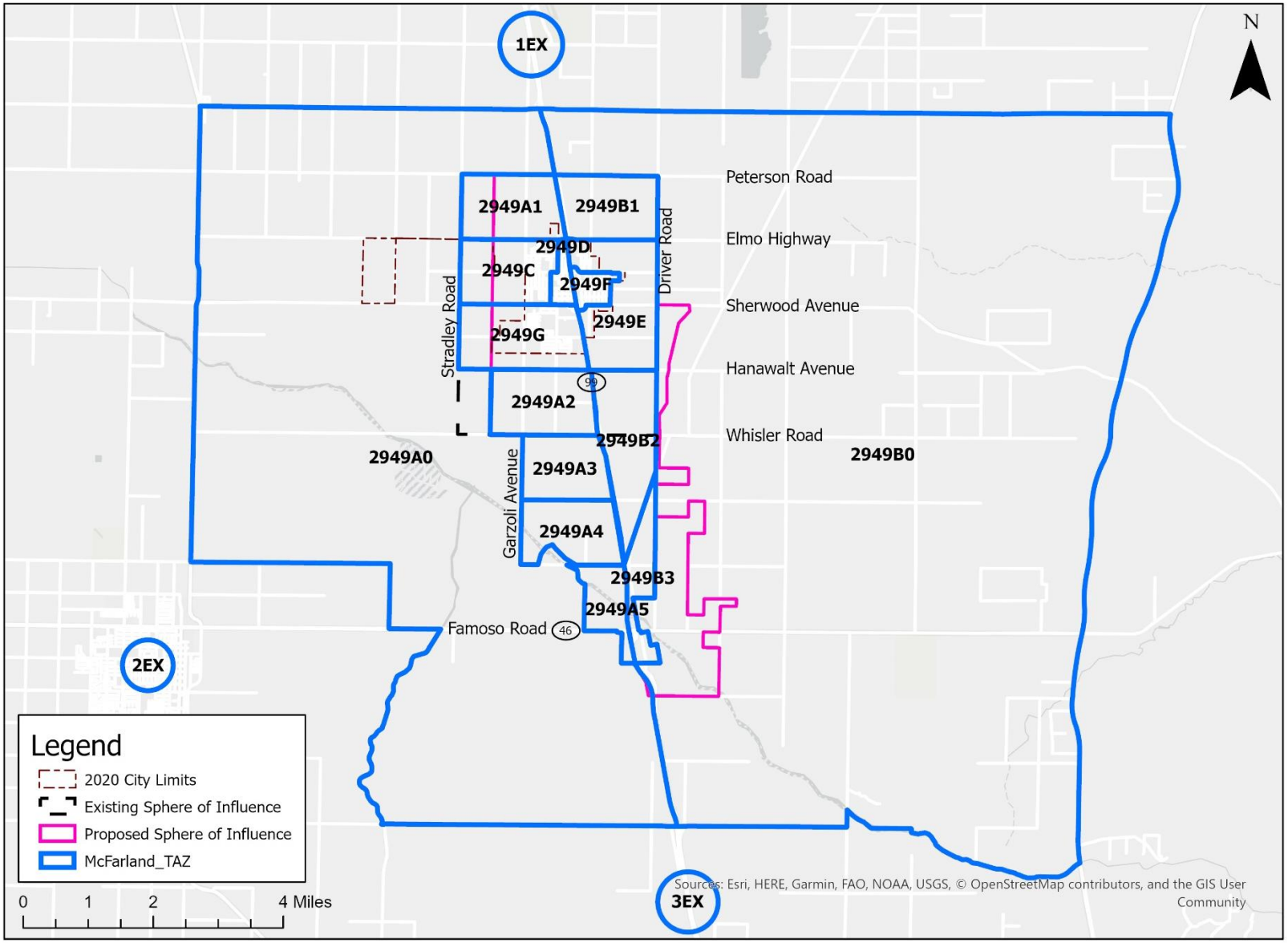


Table A4.16-4 Zone to Zone Distances

	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX
2949A0	4.54	5.46	3.00	3.49	3.88	5.08	9.26	6.42	4.64	5.41	5.73	6.08	4.40	4.88	5.38	5.15	3.60	11.71	6.01	27.49
2949A1	5.46	1.23	4.04	5.33	6.47	7.86	8.59	2.28	5.22	7.62	4.28	7.81	1.66	2.10	3.14	2.57	2.86	6.99	10.62	30.16
2949A2	3.00	4.04	1.35	1.88	2.97	4.41	7.03	4.35	2.46	4.31	3.23	4.71	2.90	2.83	2.97	2.90	1.68	10.53	8.47	26.99
2949A3	3.49	5.33	1.88	1.17	1.65	3.04	6.27	5.31	1.75	2.93	3.38	3.38	4.22	3.93	3.65	3.81	3.00	11.76	8.53	25.60
2949A4	3.88	6.47	2.97	1.65	1.20	1.94	6.32	6.42	2.44	2.04	4.27	2.71	5.35	5.08	4.72	4.93	4.13	12.91	8.28	24.59
2949A5	5.08	7.86	4.41	3.04	1.94	1.02	6.18	7.67	3.46	1.28	5.26	2.05	6.77	6.41	5.92	6.21	5.55	14.25	8.71	23.16
2949B0	9.26	8.59	7.03	6.27	6.32	6.18	5.79	7.19	5.13	5.40	4.88	4.64	8.07	7.12	5.98	6.57	7.39	13.35	14.10	23.25
2949B1	6.42	2.28	4.35	5.31	6.42	7.67	7.19	1.22	4.74	7.25	3.24	7.24	2.68	2.05	2.26	1.99	3.35	7.21	11.84	29.34
2949B2	4.64	5.22	2.46	1.75	2.44	3.46	5.13	4.74	1.31	3.00	2.34	3.09	4.26	3.65	2.98	3.34	3.18	11.41	9.78	25.44
2949B3	5.41	7.62	4.31	2.93	2.04	1.28	5.40	7.25	3.00	1.03	4.71	1.31	6.57	6.10	5.48	5.83	5.38	13.91	9.40	23.18
2949B4	5.73	4.28	3.23	3.38	4.27	5.26	4.88	3.24	2.34	4.71	0.88	4.58	3.69	2.74	1.64	2.21	3.14	9.93	11.16	26.61
2949B5	6.08	7.81	4.71	3.38	2.71	2.05	4.64	7.24	3.09	1.31	4.58	1.71	6.82	6.24	5.48	5.90	5.68	13.95	10.20	22.87
2949C	4.40	1.66	2.90	4.22	5.35	6.77	8.07	2.68	4.26	6.57	3.69	6.82	1.21	1.51	2.63	2.07	1.73	8.15	9.71	29.19
2949D	4.88	2.10	2.83	3.93	5.08	6.41	7.12	2.05	3.65	6.10	2.74	6.24	1.51	0.80	1.64	1.06	1.80	8.34	10.34	28.57
2949E	5.38	3.14	2.97	3.65	4.72	5.92	5.98	2.26	2.98	5.48	1.64	5.48	2.63	1.64	1.36	1.09	2.40	8.96	10.88	27.68
2949F	5.15	2.57	2.90	3.81	4.93	6.21	6.57	1.99	3.34	5.83	2.21	5.90	2.07	1.06	1.09	0.83	2.07	8.57	10.65	28.17
2949G	3.60	2.86	1.68	3.00	4.13	5.55	7.39	3.35	3.18	5.38	3.14	5.68	1.73	1.80	2.40	2.07	1.31	9.35	9.08	28.03
1EX	11.71	6.99	10.53	11.76	12.91	14.25	13.35	7.21	11.41	13.91	9.93	13.95	8.15	8.34	8.96	8.57	9.35	1.05	16.19	35.94
2EX	6.01	10.62	8.47	8.53	8.28	8.71	14.10	11.84	9.78	9.40	11.16	10.20	9.71	10.34	10.88	10.65	9.08	16.19	0.93	28.19
3EX	27.49	30.16	26.99	25.60	24.59	23.16	23.25	29.34	25.44	23.18	26.61	22.87	29.19	28.57	27.68	28.17	28.03	35.94	28.19	1.02

Note: *Overland miles = (1.1795)*desireline miles + 0.4987 | R^2 = 0.98*

Figure A4.16-2 Gravity Model

$T_{ij} = P_i * ((A_j * F_{ij})/sum(A_j*F_{ij}))$
Where:
T_{ij} = Number of trips from zone I to j
P_i = Number of trip productions in zone I
A_j = Number of trip attractions in zone j
F_{ij} = Friction Factor (represents inverse of spatial separation between zone I and zone j)

$$T_{IJ} = P_I \frac{A_J F_{IJ}}{\Sigma A_J F_{IJ}}$$

I = Zone where trips are coming from
J = Zone where trips are going to
T_{IJ} = Number of trips between Zone I and J
P_I = Number of trips produced in Zone I
A_J = Number of trips attracted to zone J
F_{IJ} = Friction factor of travel between Zone I and J
$\Sigma A_J F_{IJ}$ = Sum of trips attracted to zone J * friction factor

Table A4.16-5a Business-As-Usual Trip Distribution

	Productions	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	2,827	247	50	298	234	323	253	54	42	276	62	2	458	45	33	38	22	142	147	45	56		2,827
2949A1	8,021	589	638	636	441	557	469	167	342	705	126	8	1,026	346	219	185	127	511	710	74	148		8,021
2949A2	12,610	1,077	195	1,910	1,254	1,219	842	205	180	1,503	224	10	1,712	198	163	197	113	876	474	93	166		12,610
2949A3	98	6	1	9	13	15	8	2	1	14	2	0	16	1	1	1	1	3	3	1	1		98
2949A4	14,040	783	114	818	1,348	2,847	1,799	214	115	1,425	445	7	2,800	101	85	116	62	335	363	89	172		14,040
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	1,673	90	24	95	97	148	155	65	28	187	46	2	449	18	17	25	13	52	97	14	50		1,673
2949B1	9,459	593	407	701	524	665	570	236	758	919	157	12	1,311	253	264	304	193	517	815	78	180		9,459
2949B2	802	41	9	61	79	87	63	16	10	165	19	1	152	8	7	11	6	27	26	5	10		802
2949B3	8	0	0	0	0	1	1	0	0	1	0	0	3	0	0	0	0	0	0	0	0		8
2949B4	2,604	147	48	209	183	222	184	77	63	414	54	10	460	41	44	93	39	123	131	18	44		2,604
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	12,942	1,009	653	1,224	768	929	753	245	401	1,193	202	12	1,622	655	419	305	217	1,171	841	111	211		12,942
2949D	3,181	207	117	286	188	223	181	63	119	317	49	4	404	119	180	111	96	256	187	24	49		3,181
2949E	12,280	747	311	1,080	802	953	778	299	429	1,542	219	25	1,825	271	349	533	374	760	691	90	201		12,280
2949F	6,516	400	195	570	395	469	381	140	250	707	106	10	871	177	277	344	251	453	371	47	102		6,516
2949G	16,612	1,341	410	2,297	1,173	1,309	998	291	348	1,733	268	16	2,116	497	383	363	235	1,670	796	129	239		16,612
1EX	86,891	3,041	1,240	2,707	2,211	3,092	2,867	1,189	1,196	3,572	765	37	6,364	778	609	718	420	1,733	52,441	535	1,375		86,891
2EX	12,692	1,324	182	751	680	1,075	1,047	251	162	930	253	7	1,941	146	110	132	75	398	757	2,078	391		12,692
3EX	162,935	3,213	713	2,618	2,518	4,026	4,376	1,694	729	3,974	1,138	34	9,625	538	441	577	317	1,433	3,791	762	120,418		162,935
																							366,191
Total	366,191	14,857	5,306	16,270	12,909	18,159	15,726	5,210	5,175	19,576	4,135	196	33,155	4,193	3,601	4,053	2,561	10,460	62,640	4,195	123,814	366,191	

Table A4.16-5b Redevelopment Trip Distribution

	Productions	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	94	-	0	-	-	-	-	-	-	-	-	-	-	16	3	9	5	35	12	3	9		94
2949A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	21,155	-	13	-	-	-	-	-	-	-	-	-	-	3,608	756	2,134	1,236	7,885	2,651	755	2,117		21,155
2949D	4,918	-	3	-	-	-	-	-	-	-	-	-	-	839	176	496	287	1,833	616	176	492		4,918
2949E	15,298	-	9	-	-	-	-	-	-	-	-	-	-	2,609	547	1,543	894	5,702	1,917	546	1,531		15,298
2949F	8,488	-	5	-	-	-	-	-	-	-	-	-	-	1,447	303	856	496	3,164	1,064	303	850		8,488
2949G	37,781	-	23	-	-	-	-	-	-	-	-	-	-	6,443	1,350	3,811	2,207	14,083	4,734	1,349	3,781		37,781
1EX	41,374	-	25	-	-	-	-	-	-	-	-	-	-	7,056	1,479	4,174	2,417	15,422	5,184	1,477	4,141		41,374
2EX	6,043	-	4	-	-	-	-	-	-	-	-	-	-	1,031	216	610	353	2,253	757	216	605		6,043
3EX	77,583	-	47	-	-	-	-	-	-	-	-	-	-	13,230	2,773	7,826	4,532	28,919	9,721	2,769	7,765		77,583
																							212,734
Total	212,734	-	130	-	-	-	-	-	-	-	-	-	-	36,278	7,604	21,460	12,426	79,295	26,656	7,594	21,293	212,734	

Table A4.16-5c Smart Growth Trip Distribution

	Productions	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	**18,282**	-	2,548	3,907	-	-	-	-	-	-	-	-	-	2,579	556	232	968	2,981	2,165	617	1,729		18,282
2949A2	**15,404**	-	2,147	3,292	-	-	-	-	-	-	-	-	-	2,173	469	195	816	2,512	1,824	520	1,457		15,404
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	**14,906**	-	2,078	3,185	-	-	-	-	-	-	-	-	-	2,103	453	189	790	2,431	1,765	503	1,410		14,906
2949D	**3,565**	-	497	762	-	-	-	-	-	-	-	-	-	503	108	45	189	581	422	120	337		3,565
2949E	**1,639**	-	228	350	-	-	-	-	-	-	-	-	-	231	50	21	87	267	194	55	155		1,639
2949F	**6,557**	-	914	1,401	-	-	-	-	-	-	-	-	-	925	199	83	347	1,069	776	221	620		6,557
2949G	**14,079**	-	1,962	3,008	-	-	-	-	-	-	-	-	-	1,986	428	179	746	2,296	1,667	475	1,332		14,079
1EX	**33,310**	-	4,643	7,118	-	-	-	-	-	-	-	-	-	4,699	1,013	423	1,764	5,431	3,944	1,124	3,151		33,310
2EX	**4,865**	-	678	1,040	-	-	-	-	-	-	-	-	-	686	148	62	258	793	576	164	460		4,865
3EX	**62,461**	-	8,706	13,347	-	-	-	-	-	-	-	-	-	8,811	1,900	792	3,308	10,184	7,397	2,107	5,908		62,461
																							175,069
Total	**175,069**	-	24,403	37,409	-	-	-	-	-	-	-	-	-	24,695	5,326	2,221	9,273	28,545	20,731	5,906	16,560	175,069	

Table A4.16-5d Composite Growth Trip Distribution

	Productions	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	**13,323**	-	1,370	1,965	-	-	-	249	235	-	-	-	-	1,976	407	716	554	2,534	1,593	454	1,272		13,323
2949A2	**10,502**	-	1,080	1,549	-	-	-	196	185	-	-	-	-	1,558	321	564	437	1,997	1,256	358	1,003		10,502
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	**4,104**	-	422	605	-	-	-	77	72	-	-	-	-	609	125	220	171	780	491	140	392		4,104
2949B1	**2,681**	-	276	395	-	-	-	50	47	-	-	-	-	398	82	144	111	510	321	91	256		2,681
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	**15,486**	-	1,592	2,284	-	-	-	289	273	-	-	-	-	2,297	473	832	644	2,945	1,851	527	1,479		15,486
2949D	**3,534**	-	363	521	-	-	-	66	62	-	-	-	-	524	108	190	147	672	422	120	337		3,534
2949E	**6,857**	-	705	1,011	-	-	-	128	121	-	-	-	-	1,017	209	368	285	1,304	820	234	655		6,857
2949F	**5,084**	-	523	750	-	-	-	95	90	-	-	-	-	754	155	273	211	967	608	173	486		5,084
2949G	**16,221**	-	1,668	2,392	-	-	-	303	286	-	-	-	-	2,406	495	871	674	3,084	1,939	552	1,549		16,221
1EX	**33,222**	-	3,416	4,899	-	-	-	621	585	-	-	-	-	4,928	1,014	1,785	1,381	6,317	3,972	1,132	3,173		33,222
2EX	**4,853**	-	499	716	-	-	-	91	85	-	-	-	-	720	148	261	202	923	580	165	463		4,853
3EX	**62,297**	-	6,406	9,186	-	-	-	1,164	1,097	-	-	-	-	9,241	1,901	3,347	2,590	11,846	7,448	2,122	5,949		62,297
																							178,164
Total	**178,164**	-	18,320	26,272	-	-	-	3,329	3,137	-	-	-	-	26,428	5,438	9,572	7,407	33,879	21,300	6,068	17,014	178,164	

Table A4.16-5e General Plan Trip Distribution

	Productions	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A2	15,019	-	-	3,033	-	-	-	-	-	-	-	-	-	2,662	476	1,015	775	3,493	1,711	487	1,367		15,019
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	19,328	-	-	3,903	-	-	-	-	-	-	-	-	-	3,426	612	1,306	997	4,495	2,202	627	1,759		19,328
2949D	3,831	-	-	774	-	-	-	-	-	-	-	-	-	679	121	259	198	891	436	124	349		3,831
2949E	9,005	-	-	1,818	-	-	-	-	-	-	-	-	-	1,596	285	608	465	2,094	1,026	292	819		9,005
2949F	6,589	-	-	1,331	-	-	-	-	-	-	-	-	-	1,168	209	445	340	1,533	751	214	600		6,589
2949G	20,720	-	-	4,184	-	-	-	-	-	-	-	-	-	3,673	656	1,400	1,069	4,819	2,360	672	1,886		20,720
1EX	33,062	-	-	6,676	-	-	-	-	-	-	-	-	-	5,861	1,047	2,234	1,706	7,690	3,767	1,073	3,009		33,062
2EX	4,829	-	-	975	-	-	-	-	-	-	-	-	-	856	153	326	249	1,123	550	157	439		4,829
3EX	61,997	-	-	12,519	-	-	-	-	-	-	-	-	-	10,990	1,964	4,188	3,199	14,420	7,063	2,012	5,642		61,997
																							174,380
Total	174,380	-	-	35,213	-	-	-	-	-	-	-	-	-	30,912	5,525	11,781	8,997	40,558	19,866	5,660	15,869	174,380	

A4.16.3.3 MODE CHOICE

Since it is vehicle trips that are generated for assignment to the highway network, the mode choice step is eliminated. Compact development is expected to eliminate some vehicle trips for transit and non-motorized travel. The analysis therefore included adjustments for the potential reduction in vehicle trips due to mixed or compact land use as well as proximity to public transit at the trip generation stage.

A4.16.3.4 TRIP ASSIGNMENT

Vehicle trips from trip distribution are assigned to the network according to the directional distribution of trips presented under trip distribution. The assumption is that vehicles passing through the network will use the shortest paths to and from the TAZs. The number of trips traveling over various distances produce VMT. The Table A4.16.6a through Table A4.16.6e show VMT calculations for respective growth alternatives.

Table A4.16-6a Business-as-Usual Vehicle Miles Traveled (VMT)

	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	1,119	272	895	817	1,254	1,284	499	271	1,281	334	11	2,788	199	160	202	113	509	1,726	272	1,553		15,561
2949A1	3,216	782	2,572	2,347	3,603	3,689	1,434	778	3,680	960	33	8,012	572	458	581	325	1,463	4,960	782	4,462		44,712
2949A2	3,234	787	2,586	2,360	3,623	3,710	1,442	783	3,701	966	33	8,057	575	461	584	327	1,471	4,988	787	4,487		44,962
2949A3	21	5	17	16	24	25	10	5	25	6	0	53	4	3	4	2	10	33	5	30		298
2949A4	3,040	739	2,431	2,219	3,406	3,487	1,355	736	3,479	908	31	7,574	541	433	549	307	1,383	4,688	740	4,218		42,266
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	837	204	669	611	938	960	373	203	958	250	9	2,086	149	119	151	85	381	1,291	204	1,162		11,638
2949B1	3,809	927	3,047	2,781	4,268	4,370	1,698	922	4,360	1,138	39	9,491	678	543	688	385	1,733	5,875	927	5,286		52,965
2949B2	189	46	151	138	212	217	84	46	216	56	2	471	34	27	34	19	86	291	46	262		2,627
2949B3	1	0	1	1	2	2	1	0	2	0	0	4	0	0	0	0	1	2	0	2		21
2949B4	845	206	676	617	947	969	377	205	967	252	9	2,105	150	120	153	85	384	1,303	206	1,173		11,749
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	4,441	1,080	3,552	3,242	4,976	5,095	1,980	1,075	5,083	1,326	45	11,066	790	633	803	449	2,020	6,850	1,081	6,163		61,754
2949D	1,011	246	809	738	1,133	1,160	451	245	1,157	302	10	2,519	180	144	183	102	460	1,559	246	1,403		14,056
2949E	4,016	977	3,212	2,931	4,499	4,607	1,791	972	4,596	1,199	41	10,006	715	573	726	406	1,827	6,194	977	5,573		55,836
2949F	2,063	502	1,650	1,506	2,312	2,367	920	499	2,361	616	21	5,141	367	294	373	209	939	3,182	502	2,863		28,688
2949G	4,822	1,173	3,857	3,520	5,403	5,533	2,150	1,167	5,519	1,440	49	12,015	858	688	872	488	2,194	7,438	1,173	6,692		67,052
1EX	35,619	8,665	28,489	25,999	39,908	40,865	15,882	8,622	40,765	10,637	364	88,747	6,338	5,079	6,438	3,602	16,202	54,936	8,666	49,428		495,251
2EX	7,949	1,934	6,358	5,802	8,906	9,120	3,544	1,924	9,097	2,374	81	19,805	1,414	1,133	1,437	804	3,616	12,260	1,934	11,031		110,524
3EX	88,339	21,490	70,657	64,482	98,978	101,349	39,389	21,383	101,103	26,381	903	220,104	15,718	12,595	15,966	8,934	40,184	136,249	21,494	122,588		1,228,287
																						2,288,246
Total	164,572	40,034	131,631	120,127	184,392	188,810	73,379	39,836	188,351	49,147	1,682	410,045	29,282	23,465	29,745	16,644	74,861	253,826	40,042	228,376	2,288,246	

Table A4.16-6b Redevelopment Vehicle Miles Traveled (VMT)

	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	-	0	-	-	-	-	-	-	-	-	-	-	26	7	30	14	100	82	36	283		578
2949A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	-	21	-	-	-	-	-	-	-	-	-	-	4,354	1,143	5,621	2,556	13,606	21,590	7,335	61,811		118,037
2949D	-	6	-	-	-	-	-	-	-	-	-	-	1,267	140	813	305	3,295	5,138	1,815	14,063		26,843
2949E	-	29	-	-	-	-	-	-	-	-	-	-	6,871	897	2,102	970	13,699	17,176	5,944	42,383		90,071
2949F	-	13	-	-	-	-	-	-	-	-	-	-	2,995	322	929	412	6,559	9,119	3,227	23,935		47,512
2949G	-	66	-	-	-	-	-	-	-	-	-	-	11,117	2,427	9,156	4,575	18,494	44,247	12,247	106,010		208,338
1EX	-	176	-	-	-	-	-	-	-	-	-	-	57,469	12,331	37,399	20,720	144,146	5,431	23,913	148,851		450,436
2EX	-	39	-	-	-	-	-	-	-	-	-	-	10,010	2,233	6,636	3,760	20,456	12,260	201	17,053		72,648
3EX	-	1,425	-	-	-	-	-	-	-	-	-	-	386,220	79,225	216,632	127,673	810,703	349,419	78,074	7,905		2,057,278
																						3,071,742
Total	-	1,776	-	-	-	-	-	-	-	-	-	-	480,330	98,725	279,318	160,986	1,031,058	464,463	132,791	422,294	3,071,742	

Table A4.16-6c Smart Growth Vehicle Miles Traveled (VMT)

	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	-	3,124	15,793	-	-	-	-	-	-	-	-	-	4,270	1,167	729	2,489	8,531	15,132	6,550	52,155		109,939
2949A2	-	8,681	4,457	-	-	-	-	-	-	-	-	-	6,305	1,326	581	2,364	4,218	19,200	4,399	39,323		90,854
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	-	3,440	9,242	-	-	-	-	-	-	-	-	-	2,538	685	498	1,633	4,194	14,378	4,885	41,162		82,655
2949D	-	1,043	2,156	-	-	-	-	-	-	-	-	-	760	87	74	200	1,045	3,521	1,244	9,636		19,765
2949E	-	718	1,042	-	-	-	-	-	-	-	-	-	609	82	28	94	642	1,739	602	4,291		9,847
2949F	-	2,349	4,060	-	-	-	-	-	-	-	-	-	1,913	211	90	289	2,216	6,657	2,356	17,474		37,616
2949G	-	5,616	5,053	-	-	-	-	-	-	-	-	-	3,427	770	429	1,546	3,015	15,583	4,313	37,334		77,084
1EX	-	32,453	74,919	-	-	-	-	-	-	-	-	-	38,271	8,449	3,787	15,127	50,764	4,132	18,194	113,256		359,353
2EX	-	7,202	8,801	-	-	-	-	-	-	-	-	-	6,666	1,530	672	2,745	7,204	9,329	153	12,975		57,277
3EX	-	262,578	360,191	-	-	-	-	-	-	-	-	-	257,199	54,285	21,935	93,207	285,507	265,862	59,404	6,015		1,666,184
																						2,510,574
Total	-	327,205	485,715	-	-	-	-	-	-	-	-	-	321,957	68,593	28,824	119,694	367,336	355,532	102,099	333,620	2,510,574	

Table A4.16-6d Composite Growth Vehicle Miles Traveled (VMT)

	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	-	1,680	7,943	-	-	-	2,138	534	-	-	-	-	3,272	853	2,248	1,424	7,251	11,133	4,819	38,373		81,668
2949A2	-	4,366	2,097	-	-	-	1,380	804	-	-	-	-	4,520	907	1,678	1,265	3,354	13,215	3,028	27,065		63,678
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	3,625	4,255	-	-	-	444	519	-	-	-	-	4,914	891	1,319	1,121	5,767	6,551	1,971	9,112		40,489
2949B1	-	628	1,719	-	-	-	360	57	-	-	-	-	1,066	168	326	222	1,709	2,311	1,082	7,513		17,162
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	-	2,637	6,626	-	-	-	2,336	731	-	-	-	-	2,772	714	2,191	1,332	5,081	15,080	5,123	43,172		87,795
2949D	-	762	1,475	-	-	-	470	128	-	-	-	-	792	86	311	156	1,208	3,523	1,245	9,642		19,798
2949E	-	2,215	3,007	-	-	-	766	273	-	-	-	-	2,679	343	502	309	3,132	7,346	2,542	18,126		41,241
2949F	-	1,344	2,172	-	-	-	624	179	-	-	-	-	1,560	165	297	176	2,004	5,211	1,844	13,679		29,254
2949G	-	4,773	4,017	-	-	-	2,240	957	-	-	-	-	4,152	890	2,094	1,398	4,051	18,125	5,017	43,426		91,139
1EX	-	23,877	51,565	-	-	-	8,288	4,217	-	-	-	-	40,140	8,455	15,994	11,841	59,048	4,161	18,320	114,039		359,947
2EX	-	5,299	6,058	-	-	-	1,279	1,012	-	-	-	-	6,992	1,531	2,838	2,149	8,379	9,393	154	13,065		58,148
3EX	-	193,192	247,912	-	-	-	27,062	32,178	-	-	-	-	269,757	54,320	92,646	72,964	332,097	267,701	59,815	6,056		1,655,702
																						2,546,020
Total	-	244,397	338,845	-	-	-	47,386	41,589	-	-	-	-	342,616	69,324	122,445	94,356	433,082	363,751	104,960	343,268	2,546,020	

Table A4.16-6e Composite Growth Vehicle Miles Traveled (VMT)

	2949A0	2949A1	2949A2	2949A3	2949A4	2949A5	2949B0	2949B1	2949B2	2949B3	2949B4	2949B5	2949C	2949D	2949E	2949F	2949G	1EX	2EX	3EX		Total
2949A0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A2	-	-	4,106	-	-	-	-	-	-	-	-	-	7,725	1,347	3,018	2,245	5,867	18,009	4,126	36,884		83,327
2949A3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949A5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949B5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
2949C	-	-	11,324	-	-	-	-	-	-	-	-	-	4,135	925	3,439	2,063	7,757	17,935	6,093	51,345		105,016
2949D	-	-	2,189	-	-	-	-	-	-	-	-	-	1,026	97	424	210	1,602	3,639	1,286	9,961		20,434
2949E	-	-	5,408	-	-	-	-	-	-	-	-	-	4,204	468	829	504	5,031	9,192	3,181	22,682		51,500
2949F	-	-	3,856	-	-	-	-	-	-	-	-	-	2,417	221	483	283	3,177	6,436	2,278	16,895		36,046
2949G	-	-	7,027	-	-	-	-	-	-	-	-	-	6,338	1,180	3,363	2,216	6,329	22,063	6,107	52,859		107,481
1EX	-	-	70,272	-	-	-	-	-	-	-	-	-	47,739	8,734	20,015	14,625	71,875	3,946	17,374	108,148		362,728
2EX	-	-	8,255	-	-	-	-	-	-	-	-	-	8,315	1,582	3,551	2,654	10,200	8,908	146	12,390		56,000
3EX	-	-	337,848	-	-	-	-	-	-	-	-	-	320,826	56,117	115,936	90,117	404,239	253,871	56,725	5,744		1,641,422
																						2,463,954
Total	-	-	450,286	-	-	-	-	-	-	-	-	-	402,725	70,671	151,058	114,917	516,076	343,999	97,315	316,907	2,463,954	

A4.16.4 COMPARATIVE VEHICLE MILES TRAVELED

VMT Comparison focuses on trips that either originate or end in McFarland. Although external to external trips are also calculated, they did not feature in the VMT comparisons. The baselines for comparison are the per capita VMT figures retrieved from the California Statewide Travel Demand Model (CSTDM) for TAZ 2949, which includes the City of McFarland as well as its sphere of influence. "Baseline" refers to a condition of no plan alternative, but rather an extrapolation of historic trends. The "existing baseline" is for the year 2010. Similarly, per capita VMT for the "baseline future" condition was also retrieved for TAZ 2949 from the California Statewide Travel Demand Model (CSTDM) for 2040. As Table A4.16-7 and Figure A4.16-3 show, the General Plan alternative is expected to generate the lowest per capita VMT of 12.2, which is 5.5 VMT lower than "existing" conditions and 4.5 VMT lower than the "future baseline". Notably, the "future baseline" is anticipated to reduce the least amount of per capita VMT from "existing" at 0.9 VMT.

Table A4.16-7 Vehicle Miles Traveled (VMT) Comparison

	Existing	Baseline Future	Redevelopment	Smart Growth	Composite Growth	General Plan
Per Capita VMT	17.7	16.8	14.8	12.9	14.2	12.2
Reduction in VMT from Existing	-	0.9	2.9	4.8	3.5	5.5

Figure A4.16-3 Vehicle Miles Traveled Comparison

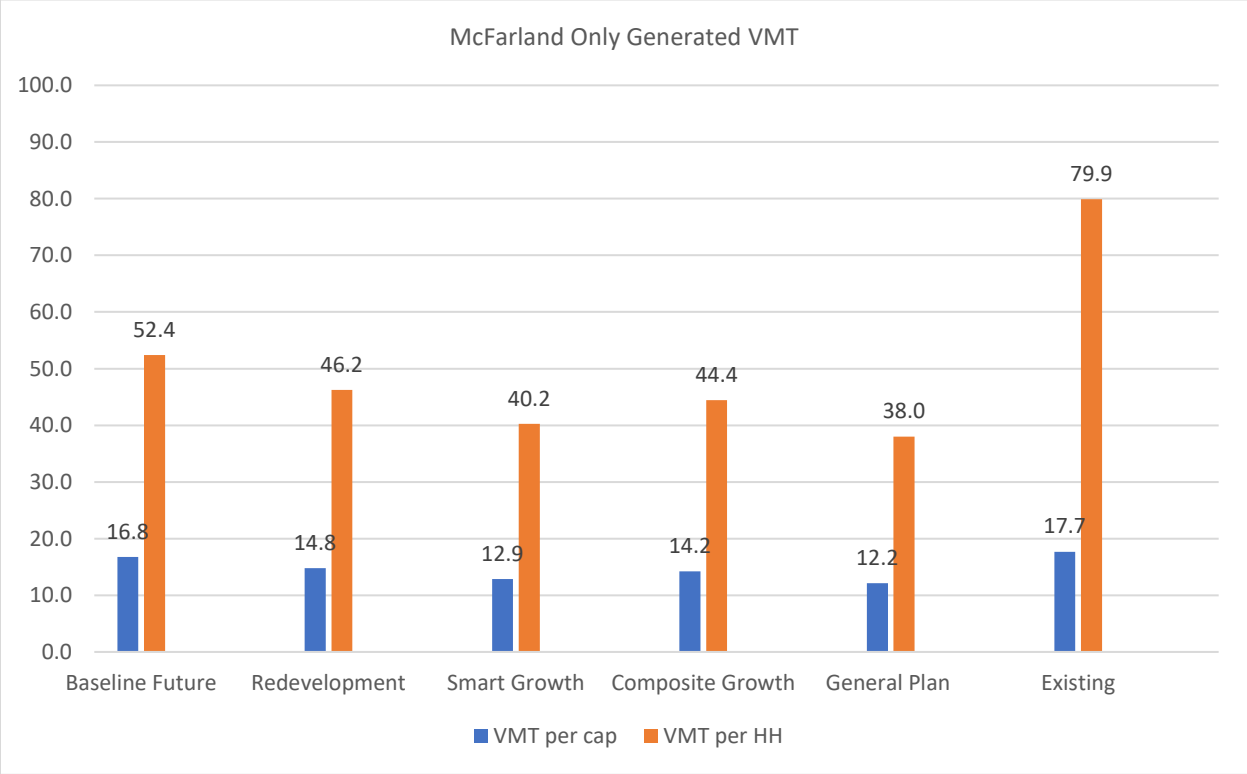
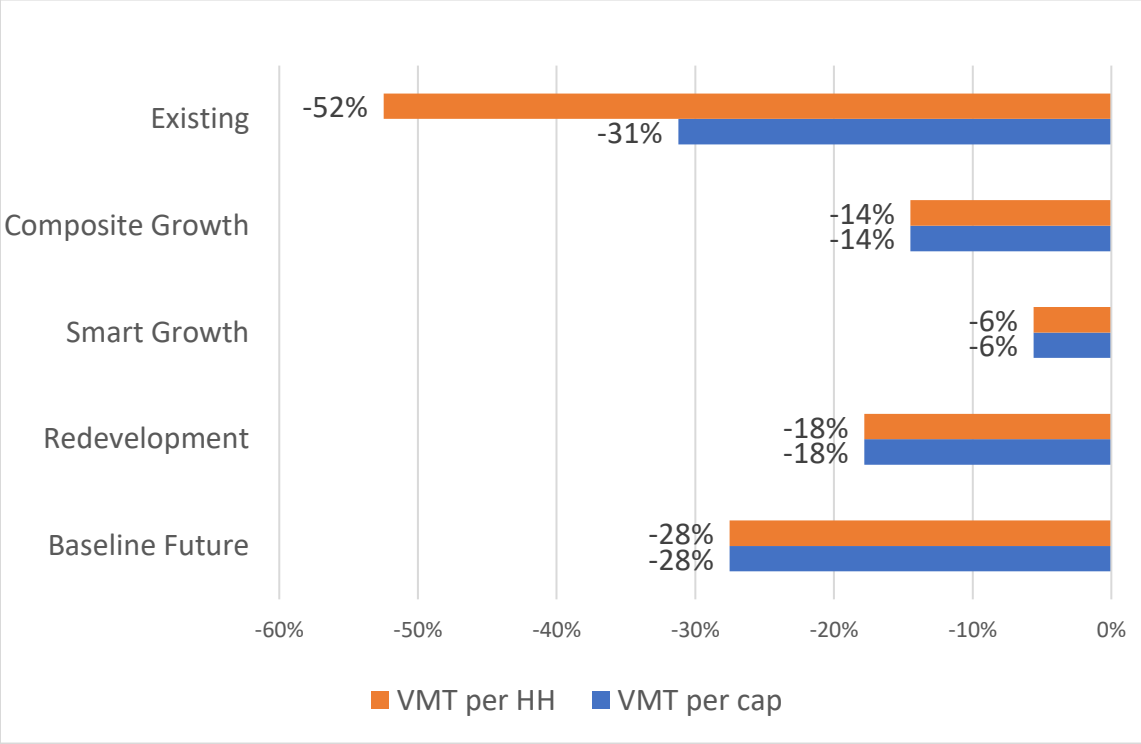


Figure A4.16-4 compares the General Plan project alternative to the baseline and other growth alternatives in terms of VMT reduction. The General Plan would produce the lowest VMT per capita and per household among all future alternatives whether accessing VMT that originates in McFarland or VMT that is related to the City, that is, trips originating elsewhere, but are destined to McFarland.

Figure A4.16-4 Percent VMT Reduction of General Plan against Alternatives



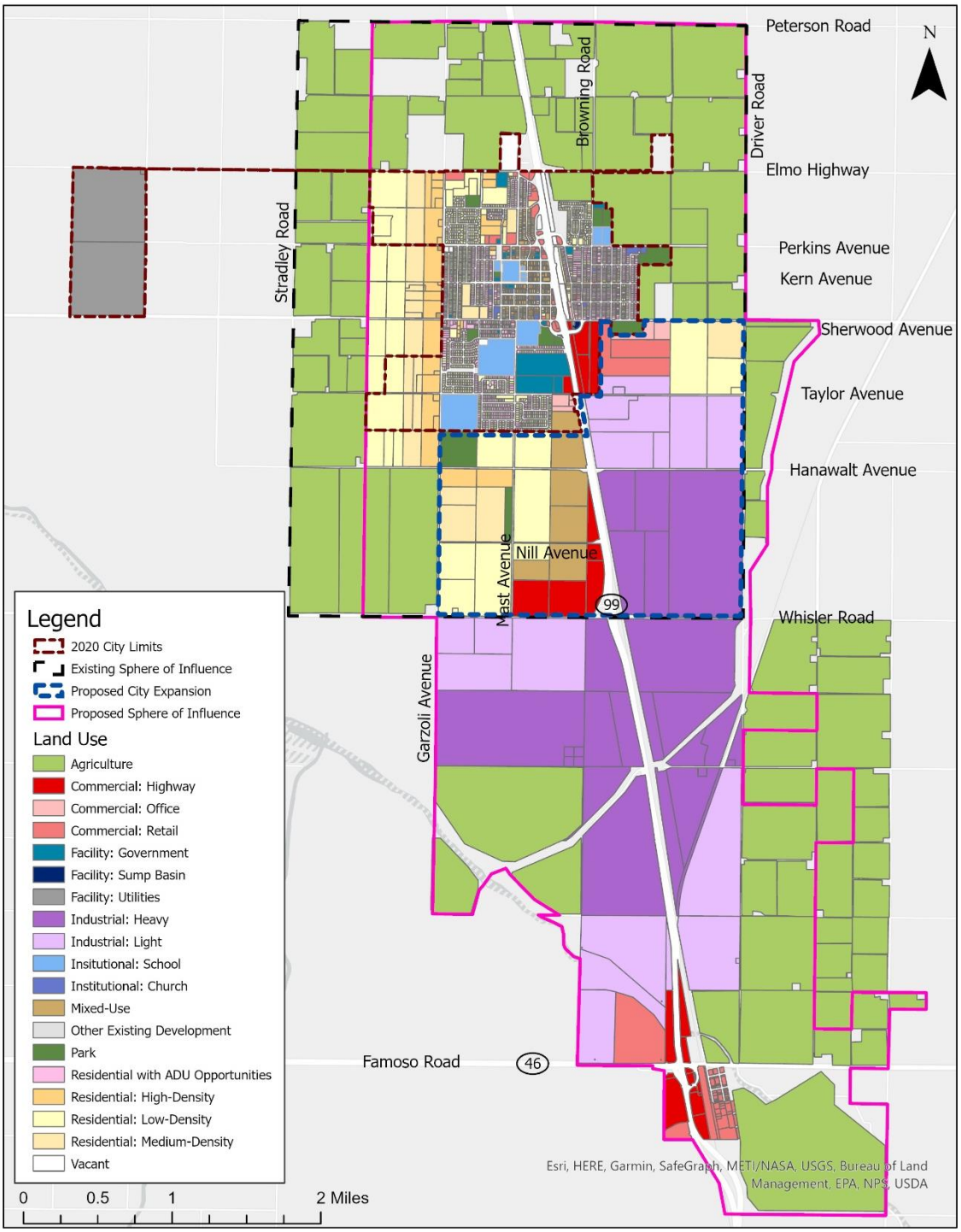
A4.16.5 POTENTIAL MITIGATION MEASURES

Consistent with statewide thresholds of significance, the proposed McFarland General Plan is assessed to produce upwards of a 50 percent reduction in per capita VMT. This is possible because the General Plan includes certain improvements to transportation and land use settings, which are projected to result in lower VMT than existing and other future alternatives. The improvements include the following:

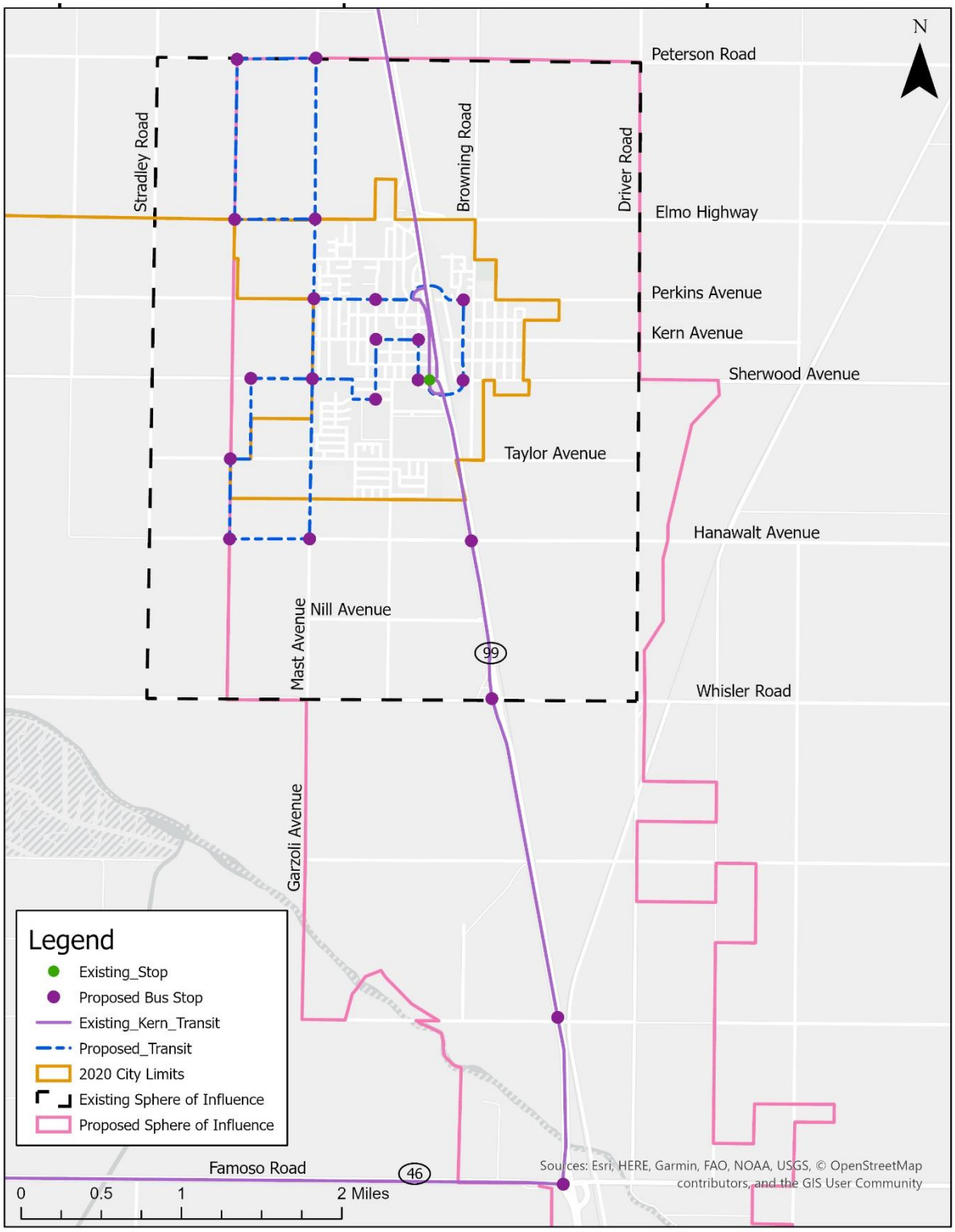
5. **Implementations of land use mix**. For example, Map A4.16-3 shows a commercial corridor along Kern Avenue on the east side of downtown, commercial streets in the downtown area, and a mixed-use corridor on the east of Mast Avenue between Nill Avenue and Whisler Road.
6. **Allocation of residential land uses in proximity to public transit**. Map A4.16-4 shows citywide distribution of transit stops in commercial and residential neighborhoods as well as major employment centers.
7. **Expansion in opportunities for non-motorized travel such as bicycle and pedestrian connectivity**. Map A4.16-5 shows proposed bicycle and pedestrian routes along major corridors citywide.

8. **Increasing intensity of development.** This is to occur with accessory dwelling units (ADU) and higher density residential developments in areas west, south, and east of downtown as Map A4.16-6 shows.

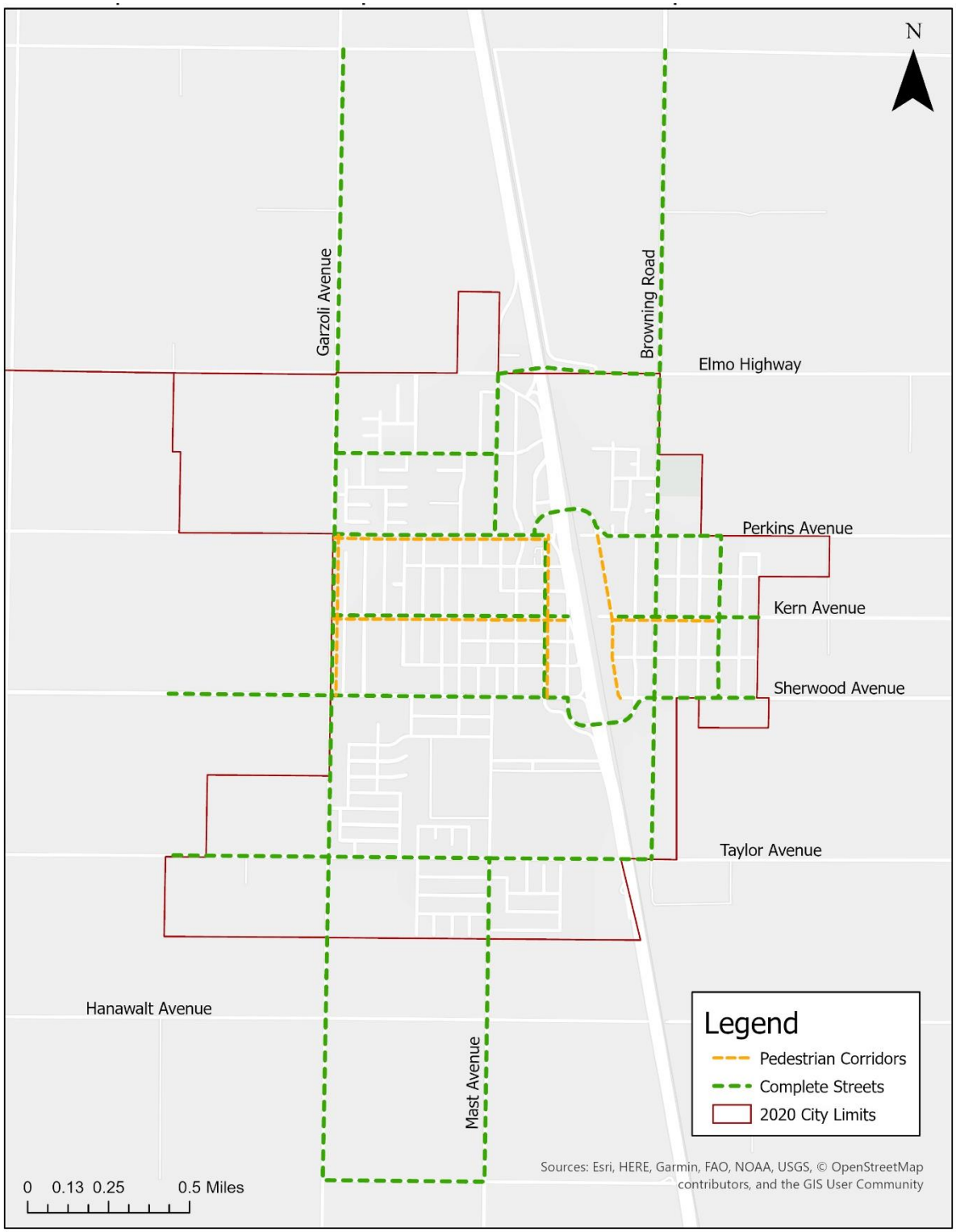
Map A4.16-3 General Plan Land Use Map



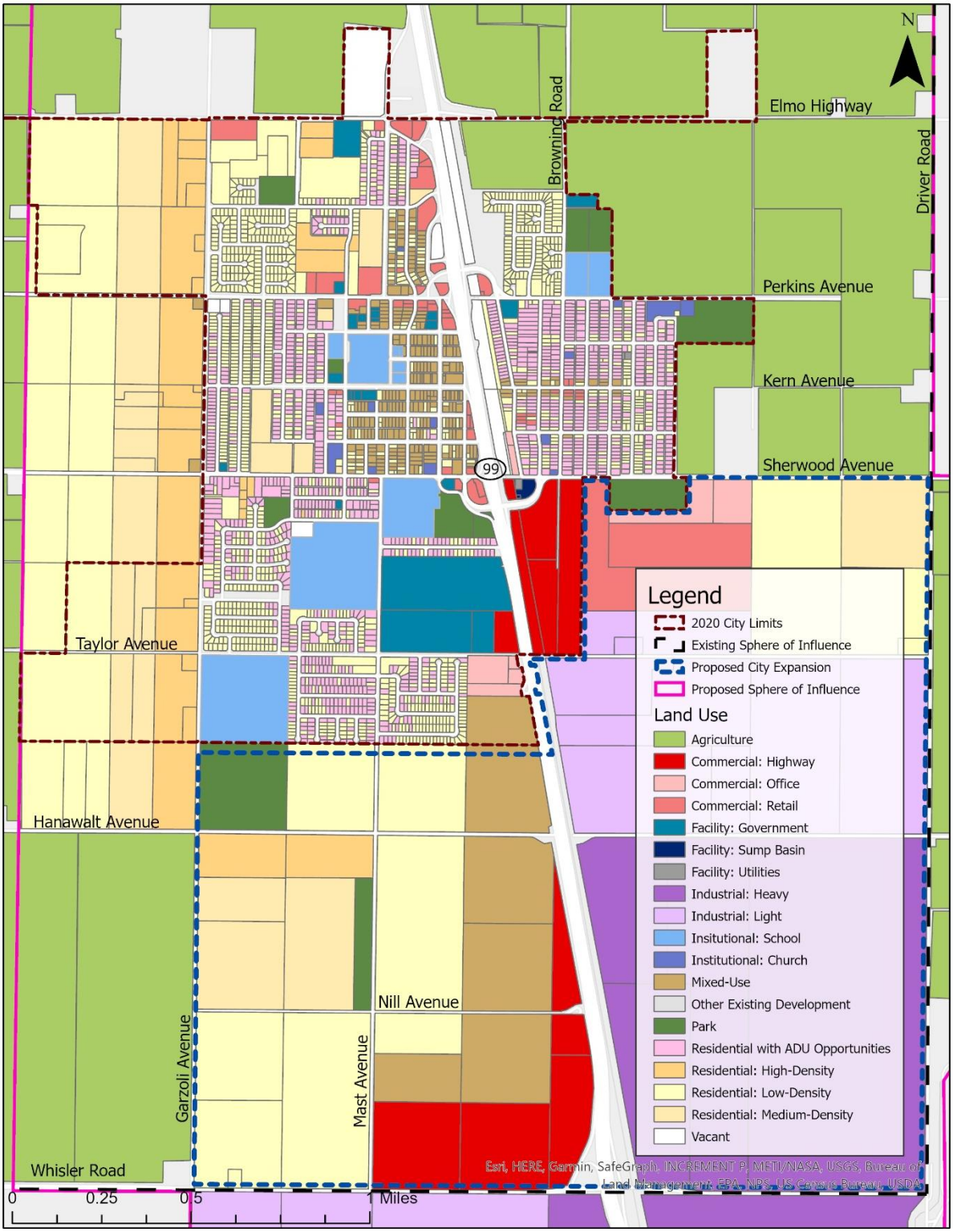
Map A4.16-4 Proposed Public Transportation



Map A4.16-5 Proposed Active Transportation Network



Map A4.16-6 General Plan Land Use Map (Central)



A4.16.6 CONCLUSIONS

The transportation impacts of each future alternatives are expected to be substantially different depending on the assumed transportation settings. For instance, the improvements suggested in the General Plan alternatives such as implementation of land use mix and promotion of non-automobile travel are projected to result in lower VMT than existing. On the other hand, baseline future, which assumes continuation of automobile-dependent settings of McFarland, is anticipated to have very little reduction in VMT from existing conditions. The General Plan would not only impact the overall travel behaviors of residents of McFarland but can also affect the overall lifestyle and health of the community. Therefore, it is important to carefully review and implement the plan to enhance the quality of live for McFarland residents, workers, and visitors.

A4.16.7 REFERENCES

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9.4 Appendix to 4.17.5 Energy Use

Summary of Comparative Energy Use: Business-As-Usual vs. General Plan: Table A4.17.5-1

Summary

	Natural Gas Use	Electricity Use
	kBTU/yr	*kWh/yr*
Business-As-Usual	982,212,120	240,723,175
General Plan - Unmitigated	935,291,570	235,749,112
- BAU-GP Unmitigated	-5%	-2%
General Plan - Mitigated	761,860,110	213,836,780
- BAU-GP Mitigated	-22%	-11%
- GP-GP Mitigated	-19%	-9%

Comparative Natural Gas Energy Use: Business-As-Usual vs. General Plan – Table A4.17.5-2

Comparative Natural Gas Energy Use: Business-As-Usual vs. General Plan

	Business-As-Usual	General Plan		General Plan		
		Unmitigated	BAU-GP Unmitigated	Mitigated	BAU-GP Mitigated	GP-GP Mitigated
	Natural Gas Use	Natural Gas Use	Natural Gas Use	Natural Gas Use	Natural Gas Use	Natural Gas Use
Land Use	**kBTU/yr**	**kBTU/yr**		**kBTU/yr**		
Apartments Low Rise	8,957,260	36,796,500	311%	31,541,300	252%	-14%
Apartments Mid Rise	0	2,702,090		2,326,680		-14%
Apartments Mid Rise	30,519,500	30,347,700	-1%	26,131,400	-14%	-14%
Automobile Care Center	240,206,000	34,305,600	-86%	27,493,500	-89%	-20%
City Park	0	0		0		
Condo/Townhouse	255,000	23,314,300	9043%	20,482,700	7932%	-12%
General Heavy Industry	357,941,000	402,914,000	13%	322,907,000	-10%	-20%
General Light Industry	25,620,000	173,846,000	579%	139,325,000	444%	-20%
General Office Building	1,615,860	1,925,280	19%	1,564,420	-3%	-19%
Government Office Building	34,517,500	38,574,400	12%	31,344,200	-9%	-19%
Junior High School	0	0		0		
Place of Worship	0	0		0		
Single Family Housing	264,568,000	168,273,000	-36%	140,855,000	-47%	-16%
Strip Mall	11,137,800	11,075,100	-1%	8,887,280	-20%	-20%
Strip Mall	6,874,200	11,217,600	63%	9,001,630	31%	-20%
Total	**982,212,120**	**935,291,570**	**-5%**	**761,860,110**	**-22%**	**-19%**

Source: CalEEMod

Comparative Electric Energy Use: Business-As-Usual vs. General Plan – Table A4.17.5-3

Comparative Electric Energy Use: Business-As-Usual vs. General Plan

	Business-As-Usual	General Plan		General Plan		
		Unmitigated	BAU-GP Unmitigated	Mitigated	BAU-GP Mitigated	GP-GP Mitigated
	Electricity Use	Electricity Use	Electricity Use	Electricity Use	Electricity Use	
Land Use	kWh/yr	kWh/yr		kWh/yr		
Apartments Low Rise	2,489,580	10,227,200	311%	9,581,590	285%	-6%
Apartments Mid Rise	-	798,052		744,114		-7%
Apartments Mid Rise	9,013,840	8,963,100	-1%	8,357,300	-7%	-7%
Automobile Care Center	33,743,300	4,819,120	-86%	4,390,300	-87%	-9%
City Park	-	0		0		
Condo/Townhouse	113,975	10,420,600	9043%	9,793,720	8493%	-6%
General Heavy Industry	50,282,200	56,599,900	13%	51,563,500	3%	-9%
General Light Industry	3,599,000	24,421,300	579%	22,248,200	518%	-9%
General Office Building	937,180	1,116,640	19%	967,456	3%	-13%
Government Office Building	20,019,800	22,372,700	12%	19,383,700	-3%	-13%
Junior High School	-	0		0		
Place of Worship	-	0		0		
Single Family Housing	88,355,500	56,196,600	-36%	53,008,000	-40%	-6%
Strip Mall	12,277,100	19,779,700	61%	16,791,400	37%	-15%
Strip Mall	19,891,700	20,034,200	1%	17,007,500	-14%	-15%
Total	**240,723,175**	**235,749,112**	**-2%**	**213,836,780**	**-11%**	**-9%**

Source: CalEEMod